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ABSTRACT

This study investigates whether there are differences in first-year college success patterns (retention) between first-generation students and non first-generation students attending a multi-campus community college. The purpose of the study was to determine the effects of remediation, family income, and the influence of a parent's highest level of education upon retention of first-generation students. The study consisted of 713 student cases taken from the cohort of all students who enrolled and applied for financial aid during the fall semester of 1994 at the Wayne County Community College District, Michigan. The sample included 397 first-generation and 258 non first-generation students. The majority of the students (61.4%) were between 25 and 44 years old, and African American (68.7%), with family incomes between $5,001 and $15,000 (43.7%). Approximately 80% of the student population of 9,638 applied for financial aid. The results of data analyses showed significant differences between first-generation and non first-generation students relative to the number of semesters attended and cumulative grade point average. Based on the findings, the author recommends using a longitudinal study to determine the academic outcomes of first-generation students beyond the first year. Research instrument appended. (Contains 29 tables and 129 references.) (NB)

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THE EFFECTS OF FIRST-GENERATION STATUS UPON THE FIRST YEAR COLLEGE SUCCESS PATTERNS OF STUDENTS ATTENDING AN URBAN MULTI-CAMPUS COMMUNITY COLLEGE

by

JACQUELINE LA-VON HODGES

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DISSERTATION

Submitted to the Graduate School

of Wayne State University,

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in partial fulfillment of the requirements

for the degree of

DOCTOR OF EDUCATION

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DEDICATION

This dissertation is dedicated to the memory of my dad,

Thomas L. Stewart (1921- 1990),

a first-generation college student.

I can only imagine the higher education journey during the 1940s

Thanks Dad.

Acknowledgments

As I began to think of all the people whom I would like to express my appreciation for their support, suggestions and hard work in making this dissertation possible, the list continues to grow. First, I would like to thank my husband and daughters, Jesse, Tamara and Camessa, for creating an environment where I could work any hour of the day or night with the space I needed to express my thoughts. A special thanks to mom [Florence Stewart] who offered unconditional love, encouragement, and support from course work, comprehensive exams, and the writing of the dissertation.

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CHAPTER I

INTRODUCTION

Background

Transforming educational dreams into an educational reality is a local concern with national consequences. No other polity has taken so genuinely its own notion of education as declared in the Ordinance of 1787, which states in part:

> Religion, morality, and education being necessary for good government and happiness of mankind, schools, and the means of education shall forever be encouraged (Brown, 1947, p. 264).

However, a contemporary test of our commitment to the quotation from the Ordinance of 1787 lies in a question posed by Kenneth Wong (1991) in an article entitled "The Politics of Urban Education as a Field of Study: An Interpretive Analysis." Wong wrote:

> Indeed, institutional diversity challenges policy makers to address two sets of questions--what are the major functions that the public school system serves and what kind of institutional and political arrangements would best serve those functions. (p. 344)

The quotations require the additional question of: Who are the individuals currently in need of higher education and what are the administrative practices that influence college policy and procedure in relation to a college student's first year college success? College success of a student is dependent upon the student's academic aspirations, preparation, and support from family and significant others (Hudson, 1991). Additionally, a student's college success is dependent upon the educational institution's effectiveness in helping the student in the achievement of individual educational goals. In the current age of budgetary constraints and a national call for effectiveness and accountability, educational institutions must focus on administrative policy and practice that effect college success of the admitted student. The college success patterns of

students attending college are also of interest to specific interest groups external but influencing the internal operations of the college environment. These interest groups are: legislators at the national and state level, accrediting agencies and prospective students. These interest groups accept the federal government's measure of effectiveness and accountability as defined in the Student Right to Know Act. This Act defines effectiveness and accountability, in higher education, as the retention and graduation rate of students. Currently, the U.S. Congress requires colleges to publish and distribute their retention and graduation rates to all prospective students. This must be in place by 1999. The inference given by the Student Right to Know Act is that the higher the rates, the more effective and accountable the college is to the student population it serves. Although 1999 is the enactment date of the legislation, educational institutions are encouraged to make public their retention and graduation rates when possible. Consequently, community colleges have a special interest in identifying the factors associated with retention and graduation. Additionally, community college administrators are interested in the identification of retention factors and how to structure administrative policy and procedure that address college success patterns of all students. Thus, the first generation student is of particular concern. The terms retention and persistence are used interchangeably throughout this report.

A study conducted on retention, (U.S. Department of Education, 1991) reported that the best predictor of student retention is a selective admission policy. Thus, universities and colleges with selective admission criteria often have the highest retention and graduation rates. However, this leaves institutions like the Wayne County Community College District located in southeastern Michigan, that has a state legislative mandate of open admission to all high school graduates or those who are eighteen years

of age or older, and a mission "to promote the educational, cultural, and economic development of the community . . . " (Wayne College Community College Catalog, 1995, p. 6) with the lowest retention and graduation rates to report. The Wayne County Community College District student body is populated with a significant number of first-generation students. A typical student attending the Wayne County Community College District is one who is older, financially independent, enrolled part-time, employed while attending school, uses financial aid to meet the cost of education, and attends with irregular persistence patterns. Since it is unlikely that an urban open door community college will experience a change in its admissions policy or its stated mission, the college has two options in the reporting of retention and graduation rates: one, accept the lower retention and graduation rates or two, attempt to improve them through the development and application of administrative policies and practices sensitive to the needs of the students admitted. The first step in developing student centered policies and practices is to gain a clear understanding of the demographic characteristics and first year academic behavior of the enrolled student. For an urban community college in southeastern Michigan, this means learning more about first-generation students, who make up a significant portion of the student body. The study of the problem is necessary because of the inevitable trade off between access and retention. However, the question remains -- what is the public willing to pay for reduced access; selectivity will raise the retention rate -- but at what cost?

Statement of the Problem

The problem investigated in this study was to detect whether there were differences in first year college success patterns between first-generation students and non

first-generation students attending an urban multi-campus community college. Information received from the research questions lead to an improved understanding of the effects of remediation, family income, and the influence of a parent's highest level of education upon college success patterns (retention) of first generation students attending the Wayne County Community College District.

Purpose of the Study

A limited amount of research has been conducted on the determination of first year college success patterns (retention) associated with first-generation students attending an urban community college. Information that is available is derived from studies conducted on students attending at the university level. The study of the effects of remediation, family income, and the influence of a parent's highest level of education upon college success patterns (retention) of first generation students attending an urban multi-campus community college is important in identifying factors that can be addressed through the development and application of administrative policies and practices. Thus, this research will lead to an informed understanding of the effects of a first-generation status on the retention and attrition patterns of students attending an urban multi-campus community college.

Variables/Model

The dependent variable investigated in this study is the number of credit hours completed during the first year of study (college success patterns) of first-generation and non first-generation community college students attending an urban multi-campus community college. The school-related independent variables that were tested included

the following: academic aspirations (program major of intent), remediation (number of credit hours enrolled in college preparatory courses), preferred campus of attendance (one of four campus locations), receipt of financial aid (awarded financial aid funds) and number of semesters enrolled. The demographic independent variables that were tested included: type of high school, gender, ethnicity, and age. The model also included parents' educational level and family income to control for the influence of family background on first year college success.

Research Questions

The following set of research questions formed the basis of the study:

- Is there a difference in first year college success patterns between first-generation and non first-generation students attending an urban multi-campus community college?
- What is the effect of remediation on first year college success relative to students being first-generation or non first-generation?
- What is the effect of fathers' and mothers' highest level of education on first year college success between first-generation and non first-generation students?
- What is the effect of family income on first year college success between first-generation and non first-generation students?
- What are the effects of selected demographic variables on first year college success between first-generation and non first-generation students?
- Can college success be predicted by remediation, academic aspirations, preferred campus of attendance, receipt of financial aid and number of semesters enrolled at an urban multi-campus community college?

Significance of the Study

With the expansion of higher education has come a larger and more diverse student population. Part of the student population growth in higher educational participation can be attributed to the growth and development of community colleges

(Witt, & et al. 1994). Like the Wayne County Community College District, two -year colleges are proud of the fact that they are non-selective in their admission process. The non-selective admissions process is based on the philosophy of "open-door" that supports enrollment of all citizens who can benefit from higher education. Thus, a commonly held contention by two-year college leaders is the notion that a large percentage of their student bodies comprise college students who come from homes where parents have not achieved college degrees. These students are commonly referred to as 'first-generation' college students (Willett, 1989, p. 48). However, little research has been conducted on first-generation students attending community colleges. Added to the limited amount of study on first-generation college students is the fact that the nation's population is changing.

As reported by the U.S. Department of Education, National Center for Education Statistics (1995), the US. population is projected to continue to age through the next century, with its median age increasing from 33.4 in 1993 to 39 respectively in 2005. Percentage for population ages forty and older is also expected to increase from 37% for males and 41% for females in 1993 to 47% and 50% in 2005. This change in the age structure of the US. population is important to community colleges, which are enrolling an increasingly large percentage of older students who are assumed to be first in their families to attend college. As stated, with the expansion of higher educational opportunity has come a larger and more diverse student population. However, with the expansion of educational access has come the accountability movement in higher education. The accountability movement demands measurement and reporting of outcomes--institutional effectiveness. Thus, the efforts of two-year colleges to measure institutional effectiveness have drawn attention to the low levels of preparedness among a student-body that is

getting older, seeking immediate employment, and more often than not first-generation students. This leaves community colleges in constant search for policies and administrative procedures that enhance students' success--institutional effectiveness--in an age of accountability. Thus, the leadership in community colleges would be wise to continue to prepare for the older, part-time student who influences enrollment, persistence, financial aid and campus support activities.

Historical Perspective

It has been said by Witt (1994) that the community college in an urban area today is what the Morrill Act was to the developing territories in the late 1800s. The Morrill Act provided for citizens of a state to have open access to higher education (Monroe, 1980). Before the passage of the Morrill Act, institutions of higher education were far from being open-door colleges, available to the masses of the nation. The Morrill Act was based on the idea of a peoples college, which would fit into a total educational system for the nation. In 1857, congressional members introduced a bill to provide higher education to the common people through the founding of special land grant colleges. This bill became law in 1862--the Morrill Act. This law provided for each state to receive thirty thousand acres of public land for each state congressional member. The funds received from the sale of the land were to be used to create colleges to train students in the agricultural and mechanical arts.

The influence that this act had upon the system of American higher education cannot be overestimated. The Morrill Act contains the following principles related to educating the citizens of a nation: 1) low cost for all citizens, 2) collegiate programming that provides a nonsectarian, non-classical education that focuses on practical vocations,

engineering, technology in agriculture and industry. As stated earlier, today's community college student population embodies the very sentiments of the Morrill Act of 1862.

During the formative years of the community college movement, private junior colleges outnumbered public institutions. However, by 1960 public community colleges out numbered private ones. This occurrence was brought on by several developments in American history which helped shape the community college as we know it today. Community colleges experienced extensive growth during the Depression era of the 1930s and during the post World War II era of the 1940s. Nevertheless, before these occurrences, there were the concern and support from the federal government. Concerned parents and local civic leaders were primary in the development and growth of the local community college. These concerned citizens also had the support of governmental commissions and educational organizations. These support groups made recommendations and supported legislation for the community college movement.

Specifically, the statements of support embodied three claims about the community college: a) The nation is made more secure if citizens are educated, b) national economic wealth increases in proportion to the increase in educational investments, and c) the promise of freedom and the good life can be secured through extending educational opportunity. These arguments are the same as those used in support of free secondary education from the 1830s to the 1900s.

Other governmental actions that influenced the community college movement prior to the 1960s were President Harry S. Truman's Commission on Higher Education (1946-1947) and President Dwight D. Eisenhower's Committee on Education Beyond High School, 1955-1956. The Truman commission offered several recommendations for developing opportunities for a community college education. However, the one

recommendation that stood out to this researcher was the development of a tuition free community college, thus extending the public schools to the thirteenth and fourteenth grades. The Truman commission also addressed the issues of a society not tolerating education for the rich only. The Truman Commission was forceful in saying that a society that restricted education to the "well to do" was on its way to the creation and continuation of a class society. A decade later, Eisenhower's Committee reaffirmed Truman's Commission on the issue of higher education for the masses. The Committee concluded:

> Communities or groups of neighboring communities faced with an impending shortage of higher education capacity will do well to consider new two-year community colleges as part of the solution. Experience in a number of areas has demonstrated that, with carefully planned facilities and programs, community colleges can be highly effective in affording readily available opportunities for excellent education beyond high school (President's Committee on Education Beyond High School, 1957, p.12).

Neither the presidential commission nor the educational interest groups advocated an inflexible traditional university curriculum for the nation's citizens. Rather, the opposite was advocated, a position that addressed the needs of all citizens of the local community. The community college was considered by these groups as the best institution to provide low cost education and a workable curriculum on an open access system for the students of America.

The Carnegie Commission on Higher Education (1970) was also influential in shaping the history of the American community college experience. Although this commission did not advocate that every high school graduate should go to college, it did criticize the large number of low income youth not attending higher education after graduating from high school. Because of this fact at the time, the commission recommended that 230-280 new community colleges be in operation by 1980 to serve the

needs of low income youth (Carnegie Commission on Higher Education, 1970, p.51). The commission also recommended that no or very low tuition should be charged, and location should be within reasonable commuting distance of residents. The commission also opposed state universities operating community colleges as extension centers or lower divisions. The commission suggested that community colleges have their own district and governing boards separate from the secondary sector.

Community colleges have been allocated funds by the National Defense Act of 1958, the Higher Education Facilities Act of 1963, the Vocational Education Act of 1963, and the Higher Education Act of 1965. In addition, the Vocational Education Act of 1968 specified that 25% of the funds for vocational education are awarded to community colleges, with 15% of the moneys awarded to programming that supports low-income students. One of the most significant statements for its time on the support of community colleges came from the Higher Education Act of 1968. In effect, the message was that the President will submit to Congress proposals for making available post-secondary education to all who qualify and want it. The community college movement received outstanding support from the federal government and its local concerns during the 1960s, and 1970s.

However, criticism of community colleges started early in the 1980s and built to what some refer to as the taxpayers' revolt during the late eighties and 1990s. A major criticism of the community college movement is that a college education at the public's expense should not be offered. This criticism is considered by many to be a conservative or elitist view. Today's critics are like the many other critics of the community colleges in earlier years in that they both suggest that community colleges face ever a pressing need for continued financing. The programs established in the 1960s and 1970s to assure

an open access education for the masses are proposed for cutbacks or elimination. Although the community college is a place where the hopes and aspirations of citizens can be realized, the fulfillment of this mission is challenged by several concerns. As an educator of twenty years with a career within the community college sector, this researcher views the most pressing concerns as what the community college will teach, to whom and at whose expense.

National Trends of Students Enrolled in Community Colleges

Community colleges also serve a vital role in the education of the surrounding area they serve. The service area is composed of a nationally represenative population that is changing. A typical community college student does not resemble the college student of two decades ago. The current student enrolled in a community college is more likely to be non traditional--that is--older, financially independent from parents, enrolls part-time, needs financial aid, and is less likely to complete a degree within two years. Thus, issues related to national demographics, enrollment patterns, financial aid and persistence are important to the community college administrator currently and in the immediate future.

The enrollment of students over the age of 25 has increased significantly within the last twenty years. During the 1991 academic year, non traditional students constituted almost 50% of students enrolled in American institutions of higher education. However, the older student most often enrolls in community colleges. According to a report issued by the National Center for Education Statistics (NCES) entitled Profile of Older Undergraduates: 1989-90, students 25 or older made up approximately 56.2% of the enrolled population in two year public institutions. When comparing the age groups of

students attending community colleges compared to traditional younger students, older students (25 years and older) show different demographic trends and socioeconomic characteristics while attending college. According to the NCES report, older students are predominately white and female. Generally, older students tend to have a different family situation when compared with younger students. Older students are usually single with dependent children (NCES, 1991) . The parents of the older student usually have a lower educational level of attainment than their younger counterparts. Although comparing the total financial situation of students is difficult, it is assumed that younger students have access to parental resources while the older student is usually financially independent, falling into the low- to-moderate family income category.

On the issue of enrollment patterns, older students are more likely to enroll in an associate's degree and certificate program when compared to younger students. According to the NCES report, 33.3% of the older group of students are enrolled in an associate's degree program, 17% are enrolled in certificate programs, and 25% are enrolled with no intent to receive a degree or certificate. Additionally, the 25-year and older group of students tend to enroll for course work on a part-time basis, while younger, more traditional groups of students tend to enroll on a full-time arrangement. The area of Business Administration as a major is the leading area of concentration for all community college students. Older students more than younger students tend to select the area of study associated with occupation-related fields such as computer and information technology, health, and education. Further, the older student is less likely to be enrolled in the fields of life science, social behavior studies and liberal arts (NCES, 1991).

The receipt of financial aid is another area where the older and younger students differ. Compared with younger students, the 25 to 39-year-old group is more likely to

receive financial aid as grants, loans, work, and scholarships than students in the 40-year or older group. Additionally, the national NCES study shows that students 25 and older are much more likely to receive college work study assistance than their younger counterparts. Specifically, 8.9% of the older students participate in work study as compared with the 1.6% of the younger students (NCES, 1991).

The persistence pattern of students with certificates and associate degrees was different for the older and younger first-time student, according to the report by NCES. Older students have a higher rate of completing a certificate within nine months when compared with younger students. Of the older students seeking a certificate in 1989-90, 36% completed the program within the nine-month period, compared with 25% of the students from the younger group. However, the report noted that the older students were less likely to complete their certificate or degree objective once the nine-month period passed. Specifically, a 19% completion rate was recorded for the older student compared with a 22% completion rate for the younger student.

On the issue of the associate's degree, the younger student was more likely to complete the degree than the older student. The report notes that this occurrence is expected because the older student tends to enroll on a part-time basis and therefore takes longer to complete the degree of intent. However, older students were also much more likely to withdraw without returning within this two-year period. The withdrawal rate of older students was 66% compared with 40% among younger students (NCES, 1991).

In summary, the US. population is projected to continue to age through the next century, with its median age increasing from 33.4 in 1993 to 39 in 2005. Percentage of population ages forty and older is also expected to increase from 37% for males and 41% for females in 1993 to 47% and 50%, respectively, in 2005. This change in the age

structure of the U.S. population is important to community colleges, which are enrolling a growing percentage of older students amid higher education institutions. The leadership in community colleges would be wise to continue to prepare appropriate policies and procedures for the older, part-time student who influences enrollment, persistence, financial aid and campus support activities.

Thus, over a century ago a plan (the Morrill Act of 1862) that rested on a claim that an open college would revolutionize higher education has taken hold. Today, two-year colleges are the largest segment of American higher education. The associate degree has become an accepted standard of achievement. In a single century, two-year colleges have opened doors to millions of students who would otherwise have remained outside higher education. Most of the students enrolling in the nation's community colleges are described as older, financially independent from their parents, enrolled part-time, need financial aid, and are less likely to complete a degree in two-years (NCES, 1991). However, while the dreams of some have been accomplished, the dreams of many others are yet to be realized through the services delivered by the community college.

Table 1

Demographic Profile by Age Category
State of Michigan and Wayne County

	State 9,400,000	County 2,100,000	Difference
Age	Percent	Percent	Percent
Up to 17 Years of Age	26.6	22.9	(3.7)
18-24	9.8	8.7	(1.1)
25-44	31.6	26.2	(5.4)
45 and older	32.0	42.2	10.2

Source: Complied by author from U.S. Department of Commerce Bureau of the Census. (1992, May);1990 Census of population and housing summary file tape number 3A. Washington, DC: U.S. Government Printing Office and The Chronicle of Higher Education Almanac Issue. (September, 1995).

The Wayne County Community College District is an entity of the State of Michigan in the County of Wayne. The State of Michigan ranks 8th in population when compared with other states within the United States. The population of Michigan is 9,496,000 (The Chronicle of Higher Education Almanac Issue, September 1995). However, before delineating the demographic and educational profile on the county of Wayne, information is presented on the demographic and educational profile of the population living within the State of Michigan. According to information reported in The Chronicle of Higher Education Almanac Issue (September 1995), Michigan citizens carry the following profile in the distribution of age (see table 1) and ethnicity (see table 2):

Table 2

Demographic Profile by Ethnicity
State of Michigan and Wayne County

	State 9,400,000	County 2,100,000	Difference
Ethnicity	Percent	Percent	Percent
American Indian	0.6	0.4	(0.2)
African - American	13.9	39.3	25.4
Asian	1.1	1.0	(0.1)
Hispanic	2.2	2.2	- 0 -
White, non-Hispanic	83.4	56.1	(27.3)
Unknown	0.9	0.9	- 0 -

Source: Complied by author from U.S. Department of Commerce Bureau of the Census. (1992, May);1990 Census of population and housing summary file tape number 3A. Washington, DC: U.S. Government Printing Office and The Chronicle of Higher Education Almanac Issue. (September, 1995).

The Wayne County Community College District is an entity of the State of Michigan. The college's service district is defined as the whole of Wayne County except the following cities and townships: part of Canton Township, Dearborn, Garden City, Highland Park, Livonia, Northville, and Plymouth. The cities and townships excluded from the college's service district belong to other community college districts. Higher tuition is assessed to the student who attends outside of their college district. Wayne County is a densely populated area with a diverse population. The U. S. Department of Commerce Bureau of the Census for 1990 reports that Wayne County has a total population of 2.1 million with 53% being female. The county population is also ethnically diverse, with 39.3% being African American, 0.4% American Indian, Eskimo, or Aleut, 2.2% of Hispanic origin, 56.1% being White, non -Hispanic, and 1.7 identified as Other. The 1990 U.S. Census also reports the following about the population of Wayne

County: median family income in (1989) was $34,099 with <1% employed in the Armed Forces, 53% employed in the civilian sector, and 7.4% unemployed.

Table 3

Demographic and Educational Profile
State of Michigan and Wayne County

	State 4,400,000	County 2,100,000	Difference
Educational Attainment 25 years old +	Percent	Percent	Percent
< 9th grade	7.8	9.5	1.7
9th-12th no diploma	15.5	20.5	5.0
12th grade graduate	32.3	30.2	(2.1)
Some college no degree	20.4	20.3	(0.1)
Associate degree	6.7	5.6	(1.1)
Bachelor's degree	10.9	6.7	(4.2)
Graduate or Professional degree	6.4	5.0	(1.4)

Source: Complied by author from U.S. Department of Commerce Bureau of the Census. (1992, May); 1990 Census of population and housing summary file tape number 3A. Washington, DC: U.S. Government Printing Office and The Chronicle of Higher Education Almanac Issue. (September, 1995).

The educational attainment level (table 3) of the population 25 years of age and over of the State of Michigan is: <9th grade is 7.8%, some high school, no diploma shows a 15.5% distribution, high schools' diploma population is represented by 32.3%, some college, no degree is represented by 20.4%, the associate degree population shows a 6.7% distribution, bachelors' degree population is represented by 10.9% and the graduate or professional degree population is represented by 6.4%.

However, the educational attainment levels of the citizens of Wayne County increased from 1980 to 1990. According to the 1990 U.S. Census, some 13.7% of the county's population has earned a bachelor's degree or higher, compared with the state average of 17.4% and the national average of 20.3%.

The level of education possessed by the county citizens affects the level and quality of employment that will be available to local citizens in the next few years. A report released by the U. S. Conference of Mayors (November 1997) in Washington, D.C. reported that within two years, when thousands of people will be removed from the welfare rolls and join thousands of others in the Detroit area already searching for employment, the Detroit area will be short more than 75,000 jobs. Thus, by 1999, for the first time since the great depression, there will be many citizens without any subsistence. Although the national reports show that Michigan has a low unemployment rate of 4.2%, the Detroit area reports a much higher unemployment rate. A study by Northern Illinois University (November 1997) estimated fifteen people were competing for each low skill job in the Detroit area compared with three to five people competing for similar jobs across the state. Unemployment figures for the state show year-to-date (November 1997) 8.2% for the Detroit area--almost twice the year-to-date (November 1997) 4.2% statewide. Reports of this nature underscore the need of open access education in a county with the demographic profile of Wayne County.

Table 4

Downriver Campus and Wayne County
Profile by Age Category

	Campus Area N=298,335	County N= 2,100,000
Age	Percent	Percent
Up to 17 Years of Age	25.8	22.9
18-24	9.9	8.7
25-44	32.7	26.2
45 and older	31.6	42.2

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

The total population of the Downriver campus service area is 298,335, with 51.7 being female (Michigan Metropolitan Information Center/CUS/WSU, 1996). Downriver campus service area population carries the following profile in the distribution of age (see table 4) and ethnicity (see table 5). The campus profile on age is very similar to the county profile on age. The difference is found in the 25-44 years old group; the campus has significantly more 25-45 year olds than the county. Table 4 also shows that the Downriver campus is younger in age compared with the county at large. The profile on ethnicity shows that the Downriver campus is mostly represented by White, non-Hispanics with other ethnic groups represented but at a much lower rate.

Table 5

Downriver Campus and Wayne County
Profile by Ethnicity

	Campus Area N=298,335	County N=2,100, 000
Ethnicity	Percent	Percent
American Indian	0.6	0.4
African - American	4.4	39.3
Asian	1.0	1.0
Hispanic	2.9	2.2
White, non-Hispanic	93.2	56.1
Unknown	0.7	0.9

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

Table 6

Demographic and Educational Profile
Downriver Campus
N=191,911

Educational Attainment 25 years old +	Number	Percent
< 9th grade	16,467	8.5
9th-12th no diploma	36,381	19.0
12th grade graduate	69,149	36.0
Some college no degree	37,936	19.8
Associate degree	10,942	5.7
Bachelor's degree	13,789	7.2
Graduate or Professional degree	7,265	3.8
% high school graduate or higher		72.5
% Bachelor's degree or higher		11.0

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

The educational attainment levels of the population 25 years of age and over

living in the Downriver campus service area are listed in table 6. Citizens not in receipt of a high school diploma or the equivalent compride 27.5% of the population. Thus, 72.5% of the Downriver campus service area population are high school graduates or higher with 11% holding a bachelor's degree or higher (Michigan Metropolitan Information Center/CUS/WSU, 1996). With a significant number of the campus area population in need of a high school diploma, the Downriver campus chief academic leader would be wise to offer classes that support entry level students at remedial levels. Traditionally, one often thinks that most entering college students are reading and writing at the college level, however, data from the entry exams show that students attending the Downriver campus score significantly below the college level in the areas of reading and writing. Thus, this author suggests an increased number of remedial courses for the Downriver campus.

Table 7

Downtown Campus and Wayne County
Profile by Age Category

Age	Campus Area N=227,024	County N=2,100,000
	Percent	Percent
Up to 17 Years of Age	26.9	22.9
18-24	10.8	8.7
25-44	30.7	26.2
45 and older	31.5	42.2

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

The total population that The Wayne County Community College District serves in the Downtown campus service area is 227,024, with 51.4% being female (Michigan

Metropolitan Information Center/CUS/WSU, 1996). Downtown campus service area citizens carry the following profile in the distribution of age (see table 7) and ethnicity (see table 8). The campus profile on age shows that the Downtown campus area is much younger than the county's age profile with the exception of the 45 and older group. The campus age profile indicates that there may be potential in offering classes that interest mid-career individuals and a class schedule that meets the needs of parents with younger children. The profile on ethnicity shows that the African-American is the predominate ethnic population represented in the Downtown campus area followed by White, non-Hispanics.

Table 8

Downtown Campus and Wayne County
Profile by Ethnicity

	Campus Area N=227,024	County N=2,100, 000
Ethnicity	Percent	Percent
American Indian	0.7	0.4
African - American	60.7	39.3
Asian	1.2	1.0
Hispanic	9.1	2.2
White, non-Hispanic	31.7	56.1
Unknown	5.7	0.9

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

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Table 9

Demographic and Educational Profile
Downtown Campus
N=141,248

Educational Attainment 25 years old +	Number	Percent
< 9th grade	25,395	18.0
9th-12th no diploma	41,201	29.2
12th grade graduate	35,536	25.2
Some college no degree	21,228	15.0
Associate degree	5,614	4.0
Bachelor's degree	6,812	4.8
Graduate or Professional degree	5,462	3.9
% high school graduate or higher		52.9
% Bachelor's degree or higher		8.7

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

The educational attainment levels of the population 25 years of age and over living in the Downtown campus service area are presented in Table 9. Citizens not in receipt of a high school diploma or the equivalent is represented by 47.2%. Thus, 52.9% of the Downtown campus service area population are high school graduates or higher, with 8.7% holding a bachelor's degree or higher (Michigan Metropolitan Information Center/CUS/WSU, 1996). The Wayne County Community College District has the opportunity to be true to its mission at the Downtown campus by providing courses that are preparatory to collegiate level study and short term job readiness preparation for non high school graduates.

Table 10

Eastern Campus and Wayne County
Profile by Age Category

	Campus Area N=227,024	County N=2,100,000
Age	Percent	Percent
Up to 17 Years of Age	29.4	22.9
18-24	10.1	8.7
25-44	30.5	26.2
45 and older	30.0	42.2

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

The total population that the Wayne County Community College District serves in the Eastern campus service area is 417,504, with 53.8% being female. (Michigan Metropolitan Information Center/CUS/WSU, 1996). The Eastern campus is located within the center of Detroit's Empowerment Zone. The Empowerment Zone is a section of a town identified by the federal government as an entity in need of economic development. The economic development for the area comes in the form of federal funds and business development incentives. The incentives take the form of tax abatements for new area home owners and businesses. Thus, Eastern campus service area citizens are distributed by age (see table 10) and ethnicity (see table 11). The Eastern campus also shows a younger population when compared with the county population at large. The predominate ethnic group represented is the African-American, followed by White, non-Hispanics.

Table 11

Eastern Campus and Wayne County
Profile by Ethnicity

	Campus Area N=417,504	County N=2,100, 000
Ethnicity	Percent	Percent
American Indian	0.2	0.4
African - American	60.1	39.3
Asian	1.1	1.0
Hispanic	0.8	2.2
White, non-Hispanic	38.3	56.1
Unknown	0.2	0.9

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

Table 12

Demographic and Educational Profile
Eastern Campus
N=252,907

Educational Attainment 25 years old +	Number	Percent
< 9th grade	28,150	11.1
9th-12th no diploma	59,892	23.7
12th grade graduate	67,477	26.7
Some college no degree	47,487	18.8
Associate degree	12,440	4.9
Bachelor's degree	21,950	8.7
Graduate or Professional degree	15,511	6.1
% high school graduate or higher		65.2
% Bachelor's degree or higher		14.8

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

The educational attainment levels of the population 25 years of age and over living in the Eastern campus service area are listed in Table 12. Citizens not in receipt of a high school diploma or the equivalent comprise 34.8 % of the population. Thus, 65.2% of the Eastern campus service area population are high school graduates or higher, with 14.8% holding a bachelor's degree or higher (Michigan Metropolitan Information Center/CUS/WSU, 1996). The Wayne County Community College District has the opportunity to provide courses that will support the development of business for the area such as vocational technical related classes. The campus is also in the position to offer classes to members of the population that are not mobile by providing classes in local churches, high schools, and businesses.

The total population that the Wayne County Community College District serves in the Northwest campus service area is 540,497, with 54.2% being female (Michigan

Metropolitan Information Center/CUS/WSU, 1996). The Northwest campus service area population carries the following profile in the distribution of age (see table 13) and ethnicity (see table 14). The campus profile on age is very similar to the county profile on age. However, the difference is found between the 25-44 and 45 and older groups. The profile on ethnicity shows that the Northwest campus is mostly represented by African Americans, followed by White, non-Hispanics which is the reverse for the county.

Table 13

Northwest Campus and Wayne County
Profile by Age Category

	Campus Area N=540,497	County N=2,100,000
Age	Percent	Percent
Up to 17 Years of Age	28.9	22.9
18-24	10.9	8.7
25-44	31.1	26.2
45 and older	29.1	42.2

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

Table 14
Northwest Campus and Wayne County
Profile by Ethnicity

	Campus Area N=540,497	County N=2,100, 000
Ethnicity	Percent	Percent
American Indian	0.3	0.4
African - American	76.1	39.3
Asian	0.5	1.0
Hispanic	0.9	2.2
White, non-Hispanic	22.7	56.1
Unknown	0.4	0.9

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

Table 15

Demographic and Educational Profile
Northwest Campus
N=325,004

Educational Attainment 25 years old +	Number	Percent
< 9th grade	27,600	8.5
9th-12th no diploma	72,652	22.4
12th grade graduate	96,682	29.7
Some college no degree	72,843	22.4
Associate degree	19,549	6.0
Bachelor's degree	22,941	7.1
Graduate or Professional degree	12,737	3.9
% high school graduate or higher		69.2
% Bachelor's degree or higher		11.0

Source: Complied by the Michigan Metropolitan Information Center/ Center for Urban Studies/ Wayne State University, 1996 using the 1990 U.S. Department of Commerce Bureau of the Census data.

The educational attainment levels of the population 25 years of age and over living in the Northwest campus service area are presented in Table 15. Citizens not in receipt of a high school diploma or the equivalent are represented by 30.9%. Thus, 69.2% of the Northwest campus service area population are high school graduates or higher with 11.8% holding a bachelor's degree or higher (Michigan Metropolitan Information Center/CUS/WSU, 1996). The Northwest campus has the opportunity, like the Downriver campus area, to provide courses that are attractive to young parents at times that are convenient for young families. The Northwest campus is also able to capitalize on the number of citizens with degrees insomuch as their children will often enroll in classes that are traditional in nature, such as the arts and science. The latter is suggested because of the sizable number of non first-generation students attending the northwest campus. There is enormous evidence within the literature that suggests that non first-generation students enroll in classes that are traditional in nature, such as the arts and sciences.

The campus area profiles presented above document the fact that opportunity exists to extend higher education to the vast majority of citizens who reside within Wayne County. This opportunity exists because of two factors. First, many county citizens have not achieved an associate's degree or higher; second, open access to higher education is available through the Wayne County Community College District. With these factors in mind, this researcher suggests that the tax payers of the county have two choices--support selective admission with regard to socioeconomic status and academic ability or continue to finance the community college that accepts all applicants without regard to socioeconomic status or academic ability. The former suggests selective access that usually translates to higher retention and graduation rates while the latter suggests

open access that usually translates to lower retention and graduation rates. However, additional study of the latter will lend itself to knowing more about first-generation students so that polices and procedures are developed to support first-generation students in retention and graduation efforts.

Assumptions

The assumptions forming the basis of the study are as follows:

1. Students selected as subjects of the study are not limited to campus location, program offerings, or class scheduling for one academic year. Thus, there is equity and equality of course offerings between campuses.

2. The cost of education for one academic year did not limit enrollment of students who did not apply for financial aid. Since some form of financial aid is available to all students no matter the income; the author assumed that financial means exist if a student did not apply for economic support.

Limitations

The study was limited to financial aid applicants during the fall 1994 semester attending four campuses of The Wayne County Community College District. The Western center is not represented because the center is not a full-service campus offering fully supported program offerings. The findings of this study will not be generalized to other community college financial aid applicants attending other institutions. Although the results will not be generalized to other community college financial aid applicants attending other institutions, community college administrators at other institutions may find the study useful in identifying academic behavior that may be addressed through administrative policy in an urban multi-campus community college setting.

Definition of Terms

Within the context of the research narrative, the following definitions apply:

Academic aspirations - A student's program of intent.

Age - Students' age as of December 31, 1994.

Associate degree - A degree granted for the successful completion of a subbaccalaureate program of studies, usually requiring at least sixty credit hours (or at least two years) of full time college-level study

Attendance status:

Full-time - Student enrollment classification for the semester was at least twelve credit hours.

Part-time - Student enrollment classification for the semester was eleven or fewer credit hours.

Citizenship status:

U.S. Citizen - The student was born a citizen of the United States.

U.S. permanent residents - The student was naturalized as a citizen of the United States.

Other noncitizens - The student was given permission by the Immigration and Naturalization Service to remain in the United States under the status of: refugee, political asylum, indefinite parole, humanitarian parole, or a foreign student visa.

College or beyond - The completion of an associate, baccalaureate, or graduate degree.

College success - Total credit hours completed during the first year of study and enrollment in the fall semester of 1995.

Elementary school completion - Kindergarten through the eighth grade.

Ethnicity:

American Indian or Alaskan Native - A student who has indicated origins in any of the original peoples of North America.

Arabic - A student who has indicated origins in the original peoples of the Middle East or North Africa.

Asian American or Pacific Islander - A student who has indicated origins in the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or Pacific Islands. This group of students includes people from China, Japan, Korea, the Philippine Islands, Samoa, India, and Vietnam.

Black, non-Hispanic - A student who has indicated origins in the original peoples of Africa (except those of Hispanic origin).

Hispanic - A student who has indicated origins in the original peoples of Mexico, Puerto Rico, Cuba, Central or South America, or other Spanish culture or origin, regardless of race.

White, non-Hispanic - A student who has indicated origins in the original peoples of Europe (except those of Hispanic origin).

First generation student - A student whose parents have not achieved a college credential. The completions of the associate, baccalaureate or other graduate degrees are considered achievement of a college credential.

High school completion - Ninth grade through the twelfth grade or an earned diploma through the General Education Development (GED) testing program.

Parents:

Father - means the students' birth parent, adoptive parent or legal guardian. The definition of father does not include foster father or stepfather.

Mother - means the students' birth parent, adoptive parent or legal guardian. The definition of mother does not include foster mother or stepmother.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Chapter II contains a review of related literature on the subject of first-generation college students. Research specifically related to first-generation students attending a community college is limited (Barahona, 1990; Hudson, 1991; Willett, 1989) . However, more comprehensive literature exists on first-generation students attending a university. Accordingly, the literature presented in this chapter was selected from the literature domain of university studies focused on first-generation students. This chapter begins with the development of the concept of a "first-generation" college student. A review of empirical research conducted to study the "first-generation effect" (Bean & Metzner, 1985; Billson & Terry, 1987; Barahona, 1990) follows. Additionally, research findings on the subject of remediation and retention are presented relative to the experiences of students attending a community college (Fine, 1991; Haeuser, 1993; Hurtado, 1990; Manning, 1991; Slark, 1989; Tinto, 1988). Finally, research examining the influence of the parental educational level on a student's college experience (i.e., aspirations, enrollment, retention, and attrition) is presented (Hudson, 1991; Lee & Peng, 1992; Murphy, 1981; Stage & Hossler, 1989; Tinto, 1987). The chapter concludes with a summary of relevant literature and the implications of the studies concerning the first-generation college students.

First-Generation Students in Higher Education

Adachi (in Billson & Terry, 1982), a noted researcher, coined the concept "first-generation" college student to describe a student with at least one parent who had completed a college degree. A review of the literature shows that limited research has

been conducted on the status of first-generation students using a common definition (Bean & Metzner, 1985; Billson & Terry, 1982). During recent times, researchers have studied the backgrounds of a segment of students classified as first-generation college students (Chickering, 1974; Cross, 1981; Kimball & Sedlacek, 1971; Kuh & Ardaiolo, 1979; Solomon & Gordon, 1981; Welty, 1976). These researchers used different definitions of the original concept of first-generation coined by Adachi (in Billson & Terry, 1982; Bean & Metzner, 1985). For example students were considered first-generation if neither parent or sometimes siblings attended college. Researchers (Chickering, 1974; Cross, 1981; Solomon & Gordon, 1981; Welty, 1976) studied the student who was older and did not live in campus housing.

Family Background Characteristics

The researchers described the students as diverse in relation to family background. The students selected for the study were also defined as first-generation college students from blue-collar backgrounds with lower levels of formal education. Billson and Terry (1982) defined first-generation college students as those whose parents have had no college or university experience. Additionally, Billson and Terry (1982) considered students first-generation even if a sibling attended college. The research design also allowed for testing one parent completing a college degree. Thus, the influence of a student's family background inclusive of parents' educational level on a college student attrition and retention was studied with first-generation and second-generation students. Results of the study showed no significant difference between first-generation college students and second-generation college students with regard to expectations of college degree attainment. Both groups of students valued higher education for academic and

occupation development. However, unlike second-generation students, first-generation students were found to: a) work more hours; b) receive less support from their parents in all aspects of collegiate life; and c) be less likely to live on campus, be involved in campus organizations, meet friends on campus and work on campus. Accordingly, Billson and Terry (1982) reported that these factors increased the possibility of attrition for first-generation students.

Influence of Parents' Educational Levels on Persistence

Bean and Metzner (1985) contributed to the literature on first-generation students by examining the document base of the field. Bean and Metzners' (1985) review focused on the relationship between parental education and persistence. Bean and Metzner (1985) reported that the document base written on parental education level and persistence of first-generation college students contained mixed or unclear results. However, Billson and Terry (1987) contended that the research performed by Bean and Metzner (1985) was obscured by the researchers' definition of nontraditional students (part-time or older than 24 years of age or commuter) and assumption that first-generation college students were commuters from blue-collar families. This assumption was flawed because first-generation students are not always from blue-collar families. Rather, these students' parents were stratified across the economic spectrum.

Several researchers have explored the relationship between first-generation students' educational experience and the parental educational level (Murphy, 1981; Stage & Hossler, 1989). Murphy found that the parents' expectation for a child to attend college is important in the student's decision to do so. Stage and Hossler's study also found a positive relationship between a student's intent to attend college and the parent's expectation for college attendance. Both studies found that parents who attended college

more often than parents who did not attend college expected their children to attend college.

Other studies have focused on the relationship between student persistence (Pantages & Creedon, 1978; Hudson, 1991; Staats, 1991) and the highest educational attainment level of parents (Rockwell, 1972; Gruca, 1989). The results of these investigations are varied. Some researchers have reported a strong relationship between a student remaining in college and the highest educational level of parents (Rockwell, 1972), whereas others have reported a weak relationship between the two variables. (Hudson, 1991; Webb, 1973).

Influence of High School Performance on College Persistence

Barahona (1990) conducted a study to determine the effects of first-generation status upon high school sophomores and seniors regarding college aspirations, college attendance and college retention. The researcher established through a pilot study that there was a first generation effect that could not be explained entirely with reference to parental level of education, family income, race or ability. The questions forming the basis for this study were: a) whether the student's parents having attended college contributed to a student's attendance and completion of college; and b) whether first-generation students were disadvantaged in college attendance and completion because of being the first in the family to attend college. Barahona found that first-generation college students were less likely than nonfirst-generation college students to complete a degree in part because they attended public, nonselective, and two-year institutions and were more likely to be commuter students. The study also found that first-generation college students appear to experience a negative accumulation of factors including lack of support from significant others, lower parental income, lack of siblings attending college,

lower high school grades and test scores, and limited enrollment in college preparatory programs during the high school years. The study also established that the negative effects that beset first-generation college students were well established by the sophomore year of high school.

With regard to high school completion, Lee and Peng (1992) conducted a longitudinal study of eighth-grade students whose parents had not graduated from high school. The findings of the study showed that the children of a non-high school graduate were five times more likely to drop out of high school by the sophomore year. Although the literature does not contain comparable studies on students enrolled in higher educational institutions, several researchers (Gruca, 1989; Hudson, 1991; Staats, 1991) have presented arguments that support the influence and effect that a parent's education and income have on their children attending college. Gruca (1989) found that the children of college graduates preferred to attend a college or university with a selective admissions policy; Hudson (1991) showed that first year achievement was significantly related to scholastic preparation, whereas retention through graduation was more related to the influence of family and friends and; Staats (1991) showed that a student's intent to complete a degree in four years was negatively related to retention during the first year.

Influence of Socioeconomic Status on College Persistence

Parental level of education is routinely included as one of the independent variables that comprise the definition of socioeconomic status. Typically, the definition of a student's socioeconomic status also includes father's and mother's occupation and educational level. Subsequently, separating the singular effect of parents' highest level of education from the effects of other indices combined to form the definition of socioeconomic status is difficult (Barahona, 1990). Nonetheless, researchers have attempted to determine the effects of a parent's educational level on a student's success or experience in college. Researchers have examined the issues of retention and attrition rates of first-generation college students as they relate to the parent's level of education and occupation (Webb, 1973; Stage & Hossler, 1989).

Stage and Hossler (1989) studied the relationship between the socioeconomic status of a family (parents' income, marital status, level of education, and number of children enrolled in college) and the parent's expectations for the children to complete college as measured by parents' savings for college expense of the children and discussions with children about plans to attend college. Results of the study showed that a parent's educational level affected the parents' expectations of a child to attend college. Specifically, parents who graduated from college expected the same from their childern more often that parents who did not complete college. These findings were consistent with other research conducted on the subject (Carpenter & Fleishman, 1987; Conklin & Dailey, 1981; Murphy, 1981).

Academic Preparation for College and Persistence

Agreement was found in studies completed independently by Hudson (1991) and Staats (1991) on how much influence parents' educational level has on a child. However,

both researchers point to academic preparation and degree aspirations of a first year student as more influential on retention during the first year of enrollment. Hudson (1991) showed that first year achievement was significantly related to scholastic preparation, whereas retention through graduation was more related to the influence of family and friends. Staats (1991) reported similar findings as Hudson (1991). Staats (1991) showed that a student's intent to complete a degree in four years was negatively related to retention during the first year. Analyzing data collected utilizing a questionnaire, Staats reported that a student's intent to complete a degree, although not necessarily in four years, combined with the positive influence of family and friends, exerted a positive influence on retention through graduation.

Riehl (1994) compared academic preparations, aspirations and first-year achievement of first-generation and nonfirst-generation students. The study showed that first-generation students had lower SAT scores and higher high school grade point averages, but no difference was found in high school class rank. The study also showed that first-generation students were more disposed to withdrawal during the first-semester, had lower first-semester grades, and were less likely to return for the second year.

College Choice and Persistence

Joyce (1989) examined the college-choice process of prospective first-generation and nonfirst-generation college students. The results of the study showed that first-generation students were best distinguished from nonfirst-generation students on the issues of employment opportunities after graduation, co-operative education, availability of financial aid based on need and quality of the program major. Thus, first-generation students were more likely to seek employment immediately following graduation.

Additionally, Joyce (1989) showed that there is no significant difference between first-generation and nonfirst-generation college students in selected program majors.However, first-generation students were less likely to plan to attend graduate or professional school. Joyce's research also demonstrated that first-generation students were highly influenced by the reciept of financial aid.

Gruca (1989) conducted a study of the influence of a parent's level of education on the child's college choice. Gruca found that the children of college graduates preferred admission to a selective college or university. Gruca also showed that the degree of selectivity exercised by the institution is important to the nonfirst-generation student. That is, nonfirst-generation students appear to want to attend colleges and universities with selective admission policies--the more selective the greater the desire to attend.

York-Anderson and Bowman (1991) studied the differences between first generation and second generation college students' knowledge about college. York-Anderson and Bowman found no significant differences between first-generation and second-generation students on their hopes and aspirations to attend college. This finding was consistent with the earlier research conducted by Billson and Terry (1982) and Kirby (1976).

Parental Support and College Persistence

York-Anderson and Bowman (1991) assessed the student's perceptions of the parents' support in sharing information about college. The study found significant difference in perceived family support for college attendance. Second-generation college students perceived more support from family for attending college than did first generation-college students. This finding was consistent with the findings of the studies

conducted by Billson and Terry (1982).

Mallinckrodt (1988) examined the perceptions of social support and attrition between African-American and non Hispanic-white first year students. Mallinckrodt showed that perceived encouragement from family correlated positively with student persistence for both groups. Additionally, significant results were reported for African-American students on social support from members of faculty, staff, and administration. The results of this study suggest that African-American students persist more often than not when members of the campus community look like them and talk to them.

Attinasi (1989) also conducted research on first-generation college students. Attinasi studied Mexican American students' determination to either persist or withdraw from college during the freshmen year. Attinasi's research identified two stages of college participation behavior: a) prematriculation experiences and b) postmatriculation experiences. The researcher found that the parent's expectations were significant in the student's decision to attend college, whereas information on how to persist through college came from significant others (ie, relatives, teachers, and peers).

Peer Support and College Persistence

Shaw (1990) conducted a study to detect if and how goal conflict differed for first-generation and nonfirst-generation students. Differences between a student's goal and those of his/her friends were examined to assess perceived goal conflict. The finding on perceived conflict between the two groups and other groups of affiliation showed that first-generation students perceived more conflict between themselves and significant others (parents and friends before college). Shaw summarized this phase of the research by stating that the study indicates that first-generation students may fully expect to

confront change and conflict. Thus, this acknowledgment may diminish the effects on their adjustment to college. In contrast, non first-generation students may be surprised by their experience of change and conflict, and thus may be affected more.

Goal Setting

The study by Shaw (1990) also included an analysis of first-generation and nonfirst-generation student educational goals. The findings showed that first-generation students were similar to non-first-generation students with respect to overall educational goals. However, first-generation students often select goals upon entry that are career or vocationally oriented more than nonfirst-generation students. The nonfirst-generation student often selected goals upon entry that were social or nondirected (ie., liberal arts related goals).

Model of College Attrition

Pascarella and Chapman (1983) conducted a study to examine the validity of Tinto's (1975) model of college attrition by institutional type-- 4-year residential, 4-year commuter, and 2-year commuter. Tinto's model examined the effects of a student's social integration and college attrition. Thus, Pascarella and Chapman showed significant differences between institutional type in social and academic integration. Specifically, social integration (involvement in campus organizations, friends on campus, and work on campus) provided more influence in the decision to persist at 4-year residential institutions, while academic integration (first semester grade point average and expected second semester grade point average, informal contacts with the faculty, study during the week, participation in honors and career development programs) influenced students' decision to persist at 2-year and 4-year commuter institutions. The finding on the 4-year residential college was consistent with the findings of Meznek (1987). Meznek found that a student's commitment to the completion of college was the most significant determinant of student retention and persistence.

Remediation Support Services

Haeuser (1993) compared remedial students with the general student population. The study revealed that minority students, students intending to transfer to baccalaureate degree-granting colleges and universities, and full-timers were all over-represented among remedial students. Outcome measures showed that: a) more than 50% of the students taking remedial course work successfully completed the courses; b) first-time students taking remedial course work showed higher fall-to-spring retention rates than first-time students as a whole; and c) most remedial English students successfully

completed subsequent college-level courses.

Hurtado (1990) conducted a study to identify the factors that most influence the educational success of Hispanic students at Ohlone College (OC), in California. A survey was mailed to all Hispanic students (N=1,142) registered at the college in fall 1988 and spring 1989. All Hispanic students were contacted, comprising 10.5% of the student body. The response rate was 17.6%. The results of the study were:

- the respondent group was two-thirds female, compared with 50% for the Hispanic population;
- most of the respondents were over 21 years old, continuing students, enrolled full-time, and had higher grade point averages;
- 35.1% of all Hispanic students failed to maintain a grade point average of 2.0 on a 4.0 grading scale;
- nearly 70% of the respondents identified themselves as Mexican-American, Chicano, or Mexican;
- nearly 40% of the respondents felt that high school did little to prepare them for college;
- of all matriculant groups, Mexican-American students had the lowest retention rates after Native Americans;
- there was a positive correlation between respondents' family income and grade point average; and
- academically successful respondents reported taking greater advantage of student services such as financial aid and counseling.

Manning (1991) reported on a retention program designed and carried out by staff of Suffolk Community College Eastern Campus (SCCEC) located in Riverhead, New

York. The program was built on the belief that access to higher education does not necessarily lead to college success. Thus, a study was carried out to test outcomes of the retention program. Analyses of the initial enrollment survey revealed that 39.9% of the student body was less than 20 years of age; 46.7% enrolled on the full-time basis of 12 credits or more; 45% reported attending college for job preparation, while 55.3% entered with the objective of receiving a certificate or degree; and 42.5% worked between 21 and 40 hours per week. The second goal of the research was to assess the retention program offered by SCCEC. The goal of the retention program was to increase retention of students by providing skill building activities and academic support necessary for college success. The activities and support services consisted of developmental course work, faculty mentors, skill building workshops, and other activities of this nature. The group targeted for the retention program was the entire general college population, with special emphasis placed on students considered at highest risk, which was defined:

- as coming from a lower family income,
- having lower high school grades and test scores upon entry to college,
- lacking support from significant others,
- lacking a sibling attending college,
- having to work more hours, and
- not living on campus.

The results of the study showed that the retention rate for entering students after one semester increased after the program was implemented. Specifically, retention increased from 73.3% in September 1986, to 78.8% in February 1987, then to 88.9% in September 1988. Analyses also showed a post-1987 increase in the satisfactory completion of developmental courses.

Slark (1989) conducted a follow-up study to describe and evaluate the academic progress of students who had been the subjects of fall 1986 and fall 1987 Learning Assessment Retention Consortium (LARC) student outcomes studies. The study samples included 2,012 students who had completed a remedial writing course at one of 10 participating California community colleges in fall 1986 and 1,581 students who had completed a remedial reading course at one of 17 participating colleges in fall 1987. Major findings of the study included the following:

- 85% of the students receiving developmental course work in writing and 82% of the students receiving developmental course work in reading persisted at least one semester after the outcomes studies took place;
- significant differences were identified within semester-to-semester persistence rates between ethnic groups and between students who were successful in the initial remedial course of study and those who were not successful;
- 45% of the fall 1986 developmental writing students had completed first-year composition by the end of the spring 1988 semester;
- 20% of the fall 1987 developmental reading students were still enrolled in remedial reading courses one year later;
- about half the sample consistently achieved grade point averages (GPAs) with a range of 2.0 and 2.9, with more than one-quarter with a GPA more than 2.9, and almost one-quarter with a GPA below 2.0.

Under the direction of Fine (1991), the Research Department of the Minnesota House of Representatives conducted a study to examine college student retention and enrollment patterns in the state. Community college retention was examined by tracking the progress of fall 1987 entering first-year students through 1990. Study findings

included the following:

- by their second year of enrollment, 55% had dropped out;
- 16% transferred by the beginning of their fourth year of enrollment, with full-time students transferring at a higher rate than part-timers;
- 35% of the students interviewed were not enrolled in a degree program and did not intend to pursue a degree;
- by spring 1991, 25% of the fall 1988 degree-seeking students had transferred, 33% had dropped out, 30% were still enrolled, and 13% were graduates;
- most of the community college students received some type of financial aid, most commonly a grant;
- 82% of all students were employed, with dropouts working the most hours and four-year transfers working the fewest;
- 34% of all students enrolled in at least one remedial or basic skill course; and
- 29% of the students reported some problems in enrolling in desired courses.

A longitudinal study conducted by Terkla (1985) was initiated in the spring of 1972. The population for investigation comprised 10,001 high school seniors from 1,061 high schools. Follow-up studies were conducted every academic year starting with 1973-74 through 1979-80. The purpose of the study was to determine the relationship between the receipt of financial aid and a student's college persistence. The variables analyzed were: socioeconomical status, race, sex, aptitude, high school GPA, financial aid, institutional characteristics, and college persistence. Persistence was used as the dependent variable. The findings of this study showed that students receiving financial aid were more likely to complete their studies than students without financial aid. Only two other variables showed a stronger effect on persistence. The variables were: high

school GPA, and degree of intent (program major).

Influence of Financial Aid on Retention

Nora (1990) also conducted a study of students receiving financial aid to attend college. Nora's study began in 1982 and continued for three years. The study involved 170 students taken from a population of 883 Chicano students. All students were full-time or first-time community college students. The study was designed to determine the effects of financial need on non campus-based grants, high school grades, college cumulative GPA, and campus-based awards. Results of the study showed, among other findings, that students with larger dollar amount awards did better academically, and had higher levels of retention and program completion.

Carroll (1987) conducted a study of students who were originally identified by the 1980 High School and Beyond study. This study was sponsored by the U.S. Department of Education, Center for Education Statistics. A total of 11,995 high school seniors comprised the population. The seniors were tracked through the first three years of college. The results of the study showed that students with no grants dropped out of college at higher rates than students with large dollar grants in seven out of eight cases. Additionally, students at public institutions with some grant aid had a lower dropout rate than students with no grant.

Spencer (1993) studied the effects of financial aid on the persistence of financial aid recipients. The purpose of the study was to determine if recipients of financial aid persisted as well as non recipients in the completion of a college degree. The population included first-time students enrolled Fall 1988 at the Wayne County Community College District. The findings revealed a significant difference in persistence between financial

aid students and nonfinancial aid students. Students with financial aid persisted longer than students without financial aid.

Summary

A review of the literature reveals information that points to similarities and differences between first-generation and nonfirst-generation college students. First-generation and nonfirst-generation college students are similar in that both groups look to institutions of higher education for employment preparation. The hopes and aspirations of both groups of students were based on future employment preparation in a society in which a college degree has become increasingly important and the accepted passage to the middle class of mainstream American life. First-generation and nonfirst-generation college students are also similar in that both groups have a tradition of determination and potential for college success.

Although first-generation students enter college with similar aspirations for a college degree as nonfirst-generation students, first-generation students are reported to face more obstacles to college completion in the form of negatively related socioeconomic factors. The socioeconomic factors that interfere with the successful progress of first-generation college students are reported in the literature to be: a) lower family income; b) lower high school grades and test scores; c) lack of support from significant others; d) lack of siblings attending college; e) having to work more hours; f) not living on campus and; g) attending a nonselective two-year college. It should be noted that selective colleges are populated with first-generation students but not to the extent non selective two year colleges are.

As reported previously, a study conducted on retention, (U.S. Department of

Education, 1991) reported that the best predictor of student retention is a selective admission policy. Thus, universities and colleges with selective admission criteria often have the highest retention and graduation rates. However, this type of admission criteria often leaves non selective institutions, like The Wayne County Community College District in southeastern Michigan with the lowest retention and graduation rates to report. This college has a state legislative mandate of open admission to all high school graduates or those who are 18 years of age or older and a mission "to promote the educational, cultural, and economic development of the community . . . " (Wayne College Community College Catalog, 1995, p. 6).

The Wayne County Community College District student body is populated with a significant number of first-generation students. A typical student attending the college is one who is: older, financially independent, enrolls part-time, is employed while attending school, uses financial aid to meet the cost of education, and attends with irregular persistence patterns. Since it is unlikely that an urban open-door community college can change its admissions policy or its stated mission, the college has two options in the reporting of retention and graduation rates:

1. accept the lower retention and graduation rates or
2. attempt to improve it through the development and application of administrative policies and practices sensitive to the needs of the students admitted.

The first step in developing student-centered policies and practice is to gain a clear understanding of the demographic characteristics and first year academic behavior of the enrolled student. For an urban community college in southeastern Michigan, this means learning more about first-generation students, who make up a significant portion of the student body.

CHAPTER III

RESEARCH METHODOLOGY

Research Design

A retrospective, nonexperimental, descriptive research design was used for this study. This type of research design is appropriate when trying to examine the existence of relationships among variables that have been previous collected. Techniques associated with descriptive and inferential statistical research methods were used to describe and determine the extent to which variation occurred within the first year college success patterns between first-generation and non first-generation students attending an urban multi-campus community college. Thus, the unit of analysis was the individual student record.

Variables

Upon completion of the selection of the sample, demographic and academic variables from each selected case were obtained from the Student Information database. Specifically, student data included the following: gender, ethnicity, age, family income, number of courses classified as below college level (remediation), academic aspirations (program of intent), semesters of enrollment, GPA, type of high school attended, preferred campus of attendance, whether or not the student received financial aid, highest educational level completed by father, and highest educational level completed by mother. As all data were available in the students' records, no individual student was asked to provide information for the study.

Participants

The student cohort selected for investigation included those who applied for financial aid and enrolled for the fall 1994 semester at The Wayne County Community College District--a total of 713 students. The cohort included students from four of the five of the college campuses, in both urban and suburban areas. In addition to representing geographic diversity, the student cohort also represented diverse socioeconomic levels and ethnicity. The selected sample was identified from the Student Information database.

The Student Information database system maintains demographic and academic information. The demographic information was obtained from admissions and financial aid applications. Academic information was obtained from faculty grade rosters. The computer-generated report included the student's name, social security number, gender, ethnicity, birth date, GPA, financial aid award and disbursement, and programs of intent.

A stratified random sampling method was used to select the student cohort. The stratum in this study was the campus where the student was admitted and enrolled. The steps associated with this sample selection method included:

- acquiring the listing of all students, organized by campus, who applied for financial aid and enrolled during the fall 1994 semester and
- determining the campus size in proportion to the total college population.
- calculating the proportion of students enrolled at each campus to the total student enrollment that leads to the identified subgroup (campus) and
- randomly selecting (using a table of random numbers) the proportion number of student cases from each subgroup.

Table 16 presents the computations conducted to determine the proportion of the sample that would selected from each of the four campuses of Wayne County Community College District.

Table 16

Stratified Random Sample Selection

Campus	Total Student Enrollment		Sample Selection	
	Number	Percent	Number	Percent
Downriver	2506	28.9	185	26.0
Downtown	2795	32.2	207	29.0
Eastern	1735	20.0	129	18.1
Northwest	1638	18.9	192	26.9
Western (Excluded)	964	–	–	–
Total	9638	100.0	713	100.0

The percentage of students at the four campuses of interest were determined. Random sampling was completed using the campus lists. The percentage of students selected at each campus for inclusion in the study was similar to the percentage of the total community college student population at each of the four campuses.

Data Collection Procedures

The researcher began to collect data following approval of the Behavioral Investigation Committee to conduct the study. Before selecting the students whose records were going to be included in the study, a coding sheet was developed to collect the data. This type of coding sheet would provide consistency when examining the student records and assure that the same information was being obtained from all sources.

The researcher asked the personnel in the district office of Management Information Systems to assist in randomly selecting the necessary number of student records from each campus that met the criteria for inclusion in the study. After obtaining the necessary reports, the researcher trained student assistants to record the needed data on the coding sheets. The researcher randomly checked their work to assure accuracy. After the sheets were completed, the researcher entered the information from the coding sheets into a computer file for analysis using SPSS - Windows, version 8.

Data Analysis

The data analysis was divided into two sections. The first section described the sample using a combination of descriptive statistics, frequency distributions, and crosstabulations. All demographic variables were examined in terms of the independent variable, college enrollment status (first generation or non first generation).

The second section of the data analysis used inferential statistical analysis to test the hypotheses developed for this study. The types of analysis included: t-tests for two independent samples, Mann-Whitney U test for independent samples, one-way analysis of variance, and stepwise multiple linear regression analysis. All decisions on the statistical significance of the findings were made using an alpha level of .05. Table 17 presents statistical analysis that was completed for each of the hypotheses.

Table 17

Statistical Analysis

Hypothesis	Variables	Statistical Analysis
H_1: There is a significant difference in first year college success patterns between first-generation and non first-generation community college students attending an urban multi-campus community college.	Dependent Variable Completed nonremedial credit hours Independent Variable Enrollment status First generation Non first generation	t-tests for two independent samples were used to determine if there was a difference in the number of nonremedial credit hours the students had completed in four semesters between first generation and non first generation college students.
H_2: There is a significant difference in the first year college success patterns between first-generation and non-first-generation community college students by enrollment in remediation course work.	Dependent Variables Number of remedial credit hours Independent Variable Enrollment status First generation Non first generation	t-tests for two independent samples were used to determine if there was a difference in the number of remedial credit hours the students had completed between first generation and non first generation college students.
H_3: There is a significant difference in the first year college success patterns between first-generation and non first-generation community college students by parent's highest level of education.	Dependent Variable Completed nonremedial credit hours Independent Variable Enrollment status First generation Non first generation Father's educational level Mother's educational level	Factorial analysis of variance procedures were used to determine if there was a difference in the number of nonremedial credit hours completed in four semesters by enrollment status, father's educational level, and mother's educational level. The two and three way interactions were obtained to determine if there was an interaction between the independent variables that was responsible for differences in the dependent variable. If differences were found on father's and mother's educational levels or on the interactions, a posteriori tests using Scheffé's post hoc test were used to determine which levels of the independent variable was contributing to the significant result.

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Hypothesis	Variables	Statistical Analysis
H_4: There is a significant difference in the first year college success patterns between first-generation and non first-generation community college students by family income.	Dependent Variable Completed nonremedial credit hours Independent Variable Enrollment status First generation Non first generation Family Income Level	Factorial analysis of variance procedures were used to determine if there was a difference in the number of nonremedial credit hours completed in four semesters by enrollment status and family income levels. The two-way interaction was obtained to determine if there was an interaction between the independent variables that was responsible for differences in the dependent variable. If differences were found on income levels or on the interactions, a posteriori tests using Scheffé's post hoc test were used to determine which levels of the independent variable was contributing to the significant result.
H_5: There is a significant difference in the first year college success patterns between first-generation and non first-generation community college students by number of semesters enrolled.	Dependent Variable Completed nonremedial credit hours Independent Variable Enrollment status First generation Non first generation Number of semesters attended	Factorial analysis of variance procedures were used to determine if there was a difference in the number of nonremedial credit hours completed in four semesters by enrollment status and number of semesters in which the student had attended. The two-way interaction was obtained to determine if there was an interaction between the independent variables that was responsible for differences in the dependent variable. If differences were found on number of semesters attended or on the interactions, a posteriori tests using Scheffé's post hoc test were used to determine which levels of the independent variable was contributing to the significant result.
H_6: There is a significant difference in the first year college success patterns between first-generation and non first-generation community college students by cumulative grade point average.	Dependent Variable Grade point average Independent Variable Enrollment status First generation Non first generation	t-tests for two independent samples were used to determine if there was a difference in the grade point average of the students between first generation and non first generation college students.

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Hypothesis	Variables	Statistical Analysis
H_7: There is a significant difference in the first year college success patterns between first-generation and non first-generation community college students by type of high school attended.	Dependent Variable Completed nonremedial credit hours Independent Variable Type of high school attended	Mann-Whitney U test for independent samples was used to determine if there was a difference in the number of completed nonremedial credit hours between students who had attended a traditional high school and those who had obtained a GED or attended an alternative school. Because of the difference in the number of students in each group, it was not possible to use student status as an independent variable and the analysis required the use of nonparametric statistical procedures.
H_8: There is a significant difference in the first year college success patterns among first-generation and non first-generation community college students by selected demographic variables: type of high school, gender, ethnicity, and age, family income and parent's highest level of education.	Dependent Variables Number of completed credit hours Independent Variable Type of high school attended Ethnicity Age Income Father's education level Mother's education level Control Variable Student generation status	Stepwise multiple linear regression was used to determine which of the selected demographic variables could be used to predict number of completed credit hours. Stepwise multiple linear regression analysis is used when there is no previous theory that dictates order of variable entry into the regression equation. Categorical variables were dummy coded to allow their use in the regression analysis. Separate analyses were completed for the first generation students and the non first- generation students as well as for the combined group.
H_9: There is a significant difference in the first year college success patterns among first-generation and non first-generation students by selected school-related variables: GPA, enrolled in remediation course(s) academic aspirations (program of intent), preferred campus of attendance, receipt of financial aid, and number of semesters enrolled.	Dependent Variables Number of completed nonremedial credit hours Independent Variable College grade point average Number of remedial credit hours Academic aspirations Campus Financial assistance Number of semesters enrolled Control Variable Student generation status	Stepwise multiple linear regression was used to determine which of the selected school-related variables could be used to predict number of completed nonremedial credit hours. Stepwise multiple linear regression analysis is used when there is no previous theory that dictates order of variable entry into the regression equation. Categorical variables were dummy coded to allow their use in the regression analysis. Separate analyses were completed for the first generation students and the non first-generation students as well as for the combined group.

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CHAPTER IV

FINDINGS AND ANALYSIS OF RESULTS

This study was designed to detect whether there were differences in first-year college success patterns between first-generation students and non first-generation students attending an urban multi-campus community college. The study also investigated the effects of remediation, parents highest level of education, and family income on college success patterns of first-generation students. Subjects used in the study consisted of a sample of 713 student cases taken from the cohort of all students who enrolled and applied for financial aid during the fall 1994 semester at The Wayne County Community College District. Approximately 80% of the student population applies for financial aid.

The sample included 397 first-generation and 285 non first-generation college students. Information was taken from the college records of these students, with no individual contacted as part of this study. Crosstabulations were used to describe the sample, with t-tests for samples drawn from different populations, stepwise multiple regression analyses, and multivariate analysis of variance (MANOVA) used to test the nine hypotheses established for this study.

Description of the Sample

Demographic characteristics of the students were obtained from their records. Both personal and academic characteristics were included, with each of these characteristics analyzed separately.

Personal Characteristics

The personal characteristics of the sample included their age, gender, ethnicity,

family income, and mothers' and fathers' educational levels. These variables were crosstabulated by whether the students were first generation or non-first generation college students. Table 18 presents the results of these analyses for age, gender, and ethnicity.

Table 18

Crosstabulations
Personal Characteristics of the Sample (N=713)

Personal Characteristic	Generation Status of Students				Total	
	Non first-Generation		First Generation			
	Number	Percent	Number	Percent	Number	Percent
Gender						
Male	48	17.3	52	13.3	100	15.0
Female	229	82.7	339	86.7	568	85.0
(Not Reported 45)						
Age						
Up to 24 years	127	44.6	90	22.7	217	31.8
25 to 44 years	149	52.3	270	68.0	419	61.4
45 and Older	9	3.2	37	9.3	46	6.7
(Not Reported 31)						
Ethnicity						
African American	194	71.9	255	66.4	449	68.7
American Indian	3	1.1	7	1.8	10	1.5
White, non-Hispanic	48	17.8	84	21.9	132	20.2
Asian American	5	1.9	7	1.8	12	1.8
Hispanic	4	1.5	6	1.6	10	1.5
Arabic	3	1.1	2	0.5	5	0.8
Other	1	0.4	6	1.6	7	1.1
Preferred not to respond	12	4.4	17	4.4	29	4.4
(Not Reported 59)						

The majority of the sample (n=568, 85.0%) were female, with 100 (15.0%) males included in the study. Among the non first-generation students, 229 (82.7%) were female and 48 (17.3%) were male. Fifty-two (13.3%) of the first generation students were male and 339 (86.7%) were female. Gender was not reported for 45 of the participants. It should be noted that students were given the option not to respond to personal

characteristics.

The largest group of students (n=419, 61.4%) was between 25 and 44 years of age, with 217 (31.8%) 24 years or younger. Forty-six (6.7%) of the sample were more than 44 years of age. Among the non first-generation students, 127 (44.6%) were up to 24 years old, and 149 (52.3%) were between 25 and 44 years of age. Nine (3.2%) students were 45 years or older. Ninety (22.7%) of the first generation students were 25 years or less, with 270 (68.0%) between 25 and 44 years of age. Thirty-seven (9.3%) of the first generation students were more than 44 years of age. Age information was not reported on 31 of the students.

The majority of the students (n=449, 68.7%) were African American, with White, non-Hispanic indicated for 132 (20.2%) students. The remaining students included American Indian (n=10, 1.5%), Asian American (n=12, 1.8%), Hispanic (n=10, 1.5%), Arabic (n=5, 0.8%), and other (n=7, 1.1%). Twenty-nine (4.4%) of the students indicated they preferred not to respond to this question on their application. Among the non first-generation students, 194 (71.9%) were African Americans and 48 (17.8%) were White, non-Hispanics. The first generation students included 255 (66.4%) African Americans and 84 (21.9%) White, non-Hispanics. Data were unavailable on 59 of the students.

The family variables included family income and mothers' and fathers' highest level of completed education. The data collected from the student records were crosstabulated by the generation status of the participants. Table 19 presents the results of this analysis.

Table 19

Crosstabulations
Family Characteristics of the Sample (N=713)

Family Characteristic	Generation Status of Students				Total	
	Non first-Generation		First Generation			
	Number	Percent	Number	Percent	Number	Percent
Family Income						
Less than $5,000	76	37.1	104	33.3	180	34.8
$5,001 to $15,000	84	41.0	142	45.5	226	43.7
$15,001 to $25,000	14	6.8	37	11.9	51	9.9
$25,001 and over	31	15.1	29	9.3	60	11.6
(Not Reported 196)						
Fathers' Education						
Elementary School	4	2.0	44	11.4	48	8.2
High School	88	44.4	341	88.6	429	73.6
College	106	53.5	0	0.0	106	18.2
(Not Reported 130)						
Mother's Education						
Elementary	3	1.5	33	8.8	36	6.2
High School	81	30.0	344	91.2	405	69.8
College	139	68.5	0	0.0	139	24.0
(Not Reported 133)						

The largest group (n=226, 43.7%) had family incomes between $5,001 and $15,000, with 180 (34.8%) having family incomes less than $5,000. Sixty (11.6%) had family incomes in excess of $25,001, and 51 (9.9%) had family incomes between $15,001 and $25,000. Among the non first-generation students, 84 (41.0%) reported family incomes between $5,001 and $15,000, with 76 (37.1%) indicating their family incomes were less than $5,000. The largest group of first generation students (n=142, 45.5%) had family incomes between $5,001 and $15,000, and the second largest group (n=104, 33.3%) had family incomes less than $5,000. Data on family income was not reported on 196 students.

The majority of the fathers (n=429, 69.8%) had completed high school, with 106 (24.0%) of the records showing the fathers had completed college. Forty-eight (8.2%)

students had completed an elementary school education. Four (2.0%) of the fathers on non first-generation students had an elementary school education, with 106 (53.5%) having completed college. The majority of the fathers (n=341, 80.2%) in the first generation student group had completed high school, with 44 (11.4%) having completed elementary school. Information regarding fathers' educational level was not reported on 130 of the participants.

The majority of the mothers (n=405, 69.8%) had completed high school, with 139 (24.0%) completing college. Thirty-six (6.2%) of the mothers had an elementary school education. The largest group of non first-generation mothers (n=139, 68.5%) had completed college, with 3 (1.5%) completing elementary school. High school completion was reported by 3[illegible] (91.2%) of the mothers and 33 (8.8%) reported completing only elementary school. [illegible]a were not reported on mothers' educational level for 133 of the students.

Academic Characteristics

The students' programs, financial aid status, type of high school, and campus attended were obtained from their records. The data obtained on these characteristics were crosstabulated by their generation status. Table 20 presents the results of this analysis.

Table 20

Crosstabulations
Academic Characteristics of the Sample (N=713)

Academic Characteristics	Generation Status of Students				Total	
	Non first-Generation		First Generation			
	Number	Percent	Number	Percent	Number	Percent
Program						
Transfer/Traditional	85	30.5	102	26.7	187	28.3
Career/Technical	54	19.4	90	23.6	144	21.8
Allied Health	67	24.0	99	25.9	166	25.1
Self-improvement	73	26.2	91	23.8	164	24.8
(Not Reported 52)						
Financial Aid Status						
Yes	172	83.1	426	85.0	598	84.5
No	35	16.9	75	15.0	110	15.5
(Not Reported 5)						
Type of High School						
Traditional	132	86.3	364	84.3	496	84.8
GED/Alternative	21	13.7	68	15.7	89	15.2
(Not Reported 128)						
Campus Attended						
Downriver	96	33.7	93	23.4	189	27.7
Downtown	74	26.0	109	27.5	183	26.8
Eastern	47	16.5	89	22.4	136	19.9
Northwest	68	23.9	106	26.7	174	25.5
(Not Reported 31)						

The largest group of students (n=187, 28.3%) was in transfer/traditional liberal arts and science programs, with 166 (25.1%) in allied health programs. Self-improvement programs were programs listed by 164 (24.8%) of the students, with 144 (21.8%) students enrolled in career/technical programs. Among non first-generation students, 85 (30.5%) were in transfer/traditional liberal arts and science programs and 73 (26.2%) were in self-improvement programs. One hundred two (26.7%) first generation students were transfer/traditional liberal arts and science programs, with 99 (25.9%) enrolled in allied health programs. Data were not reported on 52 of the students in regards to the type of program in which they were enrolled.

The majority of the students (n=598, 84.5%) were receiving financial aid. Of this

number, 172 (83.1%) were non first-generation students and 426 (85.0%) were first generation students. Data were unavailable on financial aid status for five students.

The largest group of students (n=496, 84.8%) had attended traditional high schools, with 89 (15.2%) attending alternative types of high schools or having obtained a general education diploma (GED). The majority of the non first-generation students (n=132, 86.3%) and first generation students (n=364, 84.3%) had attended traditional high schools. Information on the type of high school was unavailable for 128 of the students.

The largest group of students (n=189, 27.7%) indicated they were attending the Downriver Campus, with 183 (26.8%) attending the Downtown Campus. The Eastern Campus was represented by 136 (19.9%) of the students, while 174 (25.5%) of the students were enrolled at the Northwest Campus. Among the non first-generation students, 96 (33.7%) were attending the Downriver Campus and 74 (26.0%) were attending the Downtown Campus. The largest group of first generation students (n=109, 27.5%) was attending the Downtown Campus and 106 (26.7%) were attending the Northwest Campus. Data were unavailable for 31 of the students included in the sample.

School Related Variables

The student records were reviewed to obtain the number of credit hours attempted, credit hours completed, credit hours in remedial course work, total number of semesters attended, number of credit hours completed in Fall, 1994; Spring, 1995; Summer, 1995; and Fall, 1995, and college grade point average. The data collected on these variables were summarized using descriptive statistics for presentation in Table 21.

Table 21

Descriptive Statistics
School-Related Variables

School-Related Variables	Mean	SD	Median	Range	
				Minimum	Maximum
Credit Hours Attempted					
First Generation	21.50	11.40	21.00	3.00	54.00
non-First Generation	22.92	11.36	23.00	3.00	52.00
Credit Hours Completed					
First Generation	17.09	11.41	15.00	0.00	51.00
non-First Generation	17.33	12.93	16.00	0.00	48.00
Credit Hours Remedial Course work					
First Generation	6.46	5.54	6.00	0.00	24.00
non-First Generation	6.29	5.30	6.00	0.00	30.00
Number of Semesters Attended					
First Generation	2.45	1.10	2.00	1.00	4.00
non-First Generation	2.53	1.05	3.00	1.00	4.00
Number of Credit Hours – Fall, 1994					
First Generation	9.25	3.07	9.00	2.00	18.00
non-First Generation	9.20	3.03	9.00	3.00	17.00
Number of Credit Hours – Spring, 1995					
First Generation	6.54	5.01	7.00	0.00	18.00
non-First Generation	7.37	5.02	9.00	0.00	18.00
Number of Credit Hours – Summer, 1995					
First Generation	2.10	3.13	0.00	0.00	14.00
non-First Generation	2.04	3.16	0.00	0.00	11.00
Number of Credit Hours – Fall, 1995					
First Generation	3.58	4.76	0.00	0.00	17.00
non-First Generation	4.35	5.12	0.00	0.00	17.00
College Grade Point Average					
First Generation	2.35	.93	2.49	0.00	4.00
non-First Generation	1.95	1.17	2.09	0.00	4.00

The mean number of credit hours attempted by first generation students was 21.50 (sd=11.40), with a median of 21 credit hours. The range of credit hours attempted by this group was from 3 to 54. Among the non-first generation students, the average number of credit hours attempted was 22.92 (sd=11.36), with a median of 23 credit hours. The

number of credit hours among this group ranged from 3 to 52 credit hours.

The mean number of credit hours completed was 17.09 (sd=11.41) for first generation students. The median number of credit hours for these students was 15 with a range from 0 to 51 credit hours completed. The students who were in the non-first generation group had completed an average of 17.33 (sd=12.93) credit hours. The range of credit hours for this group was from 0 to 48, with a median of 16 credit hours.

First generation students had completed an average of 6.46 (sd=5.54) credit hours of remedial course work. The median number of credit hours was 6, with a range from 0 to 24 credit hours in remedial course work. The mean number of credit hours in remedial course work for non-first generation students was 6.2 (sd=5.30), with a median of 6 credit hours. The number of credit hours in remedial course work ranged from 0 to 30 for non-first generation students.

The first generation students had attended 1 to 4 semesters, with a median of 2 semesters. The mean number of semesters attended for first generation students was 2.45 (sd=1.10). Non-first generation students had attended college for a mean of 2.53 (sd=1.05) semesters. The median number of semesters attended by this group was 3 with a range from 1 to 4 semester.

The students who were in the first generation group had enrolled for a mean of 9.25 (sd=3.07) credit hours in the Fall, 1994 semester, with a median of 9 credit hours. The number of credit hours ranged from 2 to 18 for the Fall, 1994 semester. The non-first generation students had enrolled for an average of 9.20 (sd=3.03) credit hours for the Fall, 1994 semester, with a median of 9 credit hours. The range of credit hours during this semester was from 3 to 17 for the non-first generation students.

During the Spring, 1995 semester, the first generation students had enrolled for a mean of 6.54 (sd=5.01) credit hours, with a median of 7 credit hours. The range of credit hours for this semester was from 0 to 18 for first generation students. Similarly, the number of credit hours for the Spring, 1995 semester ranged from 0 to 18 for non-first generation students. The mean number of credit hours for this group was 7.37 (sd=5.02) for non-first generation students during the Spring, 1995 semester.

The mean number of credit hours for first generation students during the Summer, 1995 semester was 2.10 (sd=3.13), with a median of 0 credit hours. The median statistic suggests that overall students did not enroll for the Summer, 1995 semester. The number of credit hours for this semester ranged from 0 to 14. The non-first generation students had enrolled for an average of 2.04 (sd=3.16) credit hours, with a median of 0 credit hours. The range of enrolled credit hours during the Summer, 1995 semester was from 0 to 11 for non-first generation students.

During the Fall, 1995 semester, the first generation students had enrolled for an average of 3.58 (sd=4.76) credit hours, with a median of 0 credit hours. Again, the median statistic suggests that overall students did not return for the Fall, 1995 semester. The range of credit hours for this group was from 0 to 17. The mean number of enrolled credit hours for the non-first generation students during the Fall, 1995 semester was 4.35 (sd=5.12), with a median of 0 credit hours. The range of credit hours for this group during the Fall, 1995 semester was from 0 to 17.

The college grade point averages range from 0.00 to 4.00 for the first generation students. The mean college grade point average for first generation students was 2.35 (sd=.93), with a median of 2.49. Non-first generation students had a mean college grade

point average of 1.95 (sd=1.17), with a median of 2.09. The range of college grade point average for this group was from 0.00 to 4.00.

Hypotheses Testing

Nine hypotheses were developed to determine if there were differences in school-related variables among the students based on whether they were first generation or non-first generation students. These hypotheses were tested using inferential statistics, with all decisions regarding the significance of the findings based on an alpha level of .05.

> *Null Hypothesis 1* - There is no significant difference in first year college success patterns between first-generation and non first-generation community college students attending an urban multi-campus community college.
>
> *Alternative Hypothesis 1* - There is a significant difference in first year college success patterns between first-generation and non first-generation community college students attending an urban multi-campus community college.

A t-test for two independent samples was used to test this hypothesis. The dependent variable in this analysis, college success patterns, was measured as the number of completed credit hours in a four-semester period. The independent variable was the generational status of the student. Table 22 presents the results of this analysis.

Table 22

t-Test for Two Independent Samples
Number of Completed Credit Hours by Generational Status

Generational Status	Number	Mean	SD	DF	t-Value
First Generation	397	17.15	11.43	680	-.23 (NS)
Non-first Generation	285	16.94	12.42		

The resultant t-value of -.23 was not statistically significant at an alpha level of .05

with 680 degrees of freedom. This result indicated that first generation students (m=17.15, sd=11.43) did not differ from non-first generation students (m=16.94, sd=12.42) in terms of the number of credit hours completed in the first year of college. Based on this finding, the first null hypothesis is retained.

> *Null Hypothesis II* - There is no significant difference between first-generation and non first-generation community college students in enrollment in remediation course work.
>
> *Alternative Hypothesis II* - There is a significant difference between first-generation and non first-generation community college students in enrollment in remediation course work.

The number of credit hours of remediation course work was used as the dependent variable in t-test for two independent samples. The generation status, first generation or non-first generation, of the student was used as the independent variable in this analysis. The results of the t-test for two independent samples are provided in Table 23.

Table 23

t-Test for Two Independent Samples
Number of Credit Hours in Remediation Course Work by Generational Status

Generational Status	Number	Mean	SD	DF	t-Value
First Generation	397	6.64	5.77	680	1.06 (NS)
Non-first Generation	285	6.19	5.09		

The t-value of 1.06 obtained on the comparison of the number of credit hours in remediation course work completed by first generation and non-first generation students was not statistically significant at an alpha level of .05 with 680 degrees of freedom. This result indicated that students who were categorized as first generation (m=6.64, sd=5.77) did not differ significantly from non-first generation students (m=6.19, sd=5.09) in the

number of credit hours completed in remedial course work. Based on this finding, the null hypothesis of no difference is retained.

> *Null Hypothesis III* - There is no significant difference in the first year college success patterns between first-generation and non first-generation community college students by parents highest level of education.
>
> *Alternative Hypothesis III* - There is a significant difference in the first year college success patterns between first-generation and non first-generation community college students by parents highest level of education.

A 2 X 3 X 3 factorial analysis of variance was used to compare the number of completed credit hours by generational status, father's educational level, and mother's educational level. First generation and non-first generation students were the two levels of generational status, with father's education and mother's education divided into three levels: completed elementary school, completed high school, and completed college. Completion of some college was included in the high school graduates. Table 24 presents the results of this analysis.

Table 24

Factorial Analysis of Variance
Completed Credit Hours by
Generational Status, Father's Education and Mother's Education

Source of Variation	N	Mean	SD	DF	F ratio
Generation Status					
First Generation	321	17.24	11.51	1/562	.91
non-First Generation	255	16.84	12.49		
Father's Educational Level					
Completed Elementary School	47	16.32	11.59	2/562	.15
Completed High School	390	17.29	12.06		
Completed College	139	16.67	12.79		
Mother's Educational Level					
Completed Elementary School	35	17.72	11.39	2/562	1.83
Completed High School	366	22.22	11.28		
Completed College	175	22.71	11.89		
Generation Status X Father's Educational Level					
First Generation X Completed Elementary School	44	20.36	11.30	2/562	.58
First Generation X Completed High School	341	21.97	11.46		
First Generation X Completed College	40	20.10	11.29		
non-First Generation X Completed Elementary School	4	15.50	12.66		
non-First Generation X Completed High School	88	22.27	11.99		
non-First Generation X Completed College	106	23.41	10.92		
Generation Status X Mother's Educational Level					
First Generation X Completed Elementary School	33	17.79	11.00	2/562	.62
First Generation X Completed High School	344	22.07	11.50		
First Generation X Completed College	362	22.40	12.06		
non-First Generation X Completed Elementary School	3	17.00	18.19		
non-First Generation X Completed High School	61	23.10	10.02		
non-First Generation X Completed College	139	22.84	11.85		
Generation Status X Mother's Education Level X Father's Educational Level					
First Generation X F Elementary X M Elementary	14	14.93	12.77	2/562	.16
First Generation X F Elementary X M High School	24	17.67	11.01		
First Generation X F High School X M Elementary	16	13.25	10.12		
First Generation X F High School X M High School	262	17.64	11.62		
non-First Generation X F Elementary X M Elementary	1	3.00	–		
non-First Generation X F Elementary X M College	8	16.38	12.08		
non-First Generation X F High School X M High School	5	17.20	10.43		
non-First Generation X F High School X M College	107	17.06	13.42		
non-First Generation X F College X M Elementary	3	11.33	14.01		
non-First Generation X F College X M High School	72	17.92	11.06		
non-First Generation X F College X M College	59	15.64	12.81		

No statistically significant differences were found for the main effects of generational status, father's educational level, or mother's educational level. The results on the 2 X 3 interactions and the 2 X 3 X 3 interaction were not statistically significant.

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These findings indicated that the number of credit hours completed successfully did not differ among the students relative to their generational status, their fathers' or mothers' educational levels or the interactions between these variables. Based on the lack of significance on this analysis, the null hypothesis of no difference is retained.

> *Null Hypothesis IV* - There is no significant difference in first year college success patterns between first-generation and non first-generation community college students by family income.
>
> *Alternative Hypothesis IV* - There is a significant difference in first year college success patterns between first-generation and non first-generation community college students by family income.

A 2 X 4 factorial analysis of variance was used to determine if there was a difference in the number of completed credit hours by the generational status of the student and his/her family income level. The number of completed credit hours was used as the dependent variable, with generational status and family income level used as the independent sample. The results of this analysis are presented in Table 25.

Table 25

Factorial Analysis of Variance
Completed Credit Hours by
Generational Status and Family Income Level

Source of Variation	N	Mean	SD	DF	F ratio
Generational Status					
First Generation	205	17.22	11.30	1/509	.01
non-First Generation	312	16.98	12.80		
Income					
Up to $5,000	180	16.62	11.59	3/509	.74
$5,001to $15,000	226	17.96	11.49		
$15,001 to $25,000	51	16.78	10.26		
Over $25,000	60	15.80	10.93		
Interaction Generational Status X Income					
First Generation X Up to $5,000	104	16.85	11.59	3/509	.04
First Generation X $5,001 to $15,000	142	17.88	11.49		
First Generation X $15,001 to $25,000	37	16.76	10.26		
First Generation X over $25,000	29	15.97	10.93		
non-First Generation X Up to $5,000	76	16.31	12.94		
non-First Generation X $5,001 to $15,000	84	18.10	13.27		
non-First Generation X $15,001 to $25,000	14	16.86	10.53		
non-First Generation X over $25,000	31	15.65	12.42		

The results of the factorial analysis of variance produced no statistically significant results for either main effect, generational status or income. The interaction between generational status and income on completed credit hours also was not statistically significant. These findings indicated that completed credit hours did not differ relative to either the generational status or the family income levels. Based on these results, the null hypothesis of no difference is retained.

> *Null Hypothesis V* - There is no significant difference in the first year college success patterns between first-generation and non first-generation community college students by number of semesters enrolled.

> *Alternative Hypothesis V* - There is a significant difference in the first year college success patterns between first-generation and non first-generation community college students by number of semesters enrolled.

The number of semesters in which the students enrolled and the generational status were used as independent variables in a factorial analysis of variance. The number of

completed credit hours was used as the dependent variable in these analyses. The results are presented in Table 26.

Table 26

Factorial Analysis of Variance
Completed Credit Hours by
Generational Status and Number of Enrolled Semesters

Source of Variation	N	Mean	SD	DF	F ratio
Generational Status					
First Generation	397	17.15	11.43	3/674	.99
non-First Generation	285	16.94	12.42		
Number of Enrolled Semesters					
One	161	5.45	5.07	3/674	326.35*
Two	188	12.50	6.89		
Three	180	20.49	7.69		
Four	153	30.85	9.99		
Interaction Generational Status X Enrolled Semesters					
First Generation X One	95	6.05	4.38	3/374	.63
First Generation X Two	112	13.01	6.70		
First Generation X Three	103	20.30	7.52		
First Generation X Four	87	30.88	9.72		
non-First Generation X One	66	4.59	5.85		
non-First Generation X Two	76	11.75	7.13		
non-First Generation X Three	77	20.75	7.96		
non-First Generation X Four	66	30.80	10.42		

The F ratio of 326.35 obtained for the main effect, number of enrolled semesters was statistically significant at an alpha level of .05 with 3 and 374 degrees of freedom. This result indicated that students' completed credit hours differed by the number of semesters enrolled. There was no difference in the main effect, generational status, on the number of completed credit hours. The interaction between generational status and number of completed credit hours did not differ significantly. According to these findings, there appears to be a difference in the number of completed credit hours by the number of semesters in which the student was enrolled, but not by generational status. Based on this result, the null hypothesis of no difference is retained.

Null Hypothesis VI - There is no significant difference between first-generation and non first-generation community college students in cumulative grade point average.

Alternative Hypothesis VI - There is a significant difference between first-generation and non first-generation community college students in cumulative grade point average.

The grade point average was used as the dependent variable in a t-test for two independent samples, with the generational status used as the independent variable. Table 27 presents the results of this analysis.

Table 27

t-Test for Two Independent Samples
Grade Point Average by Generational Status

Generational Status	Number	Mean	SD	DF	t-Value
First Generation	397	2.39	.91	680	5.31*
Non-first Generation	285	1.99	1.38		

*p≤.05

The comparison of the mean grade point averages between first generation and non-first generation students produced a t-value of 5.31 which was statistically significant at an alpha level of .05 with 680 degrees of freedom. This result indicated that first generation students (m=2.39, sd=.91) had significantly higher GPAs than non-first generation students (m=1.99, sd=1.38). Based on this finding, the null hypothesis of no difference in grade point average between these two groups of students is rejected.

Null Hypothesis VII - There is no significant difference in the first year college success patterns between first-generation and non first-generation community college students by type of high school attended.

Alternative Hypothesis VII - There is a significant difference in the first year college success patterns between first-generation and non first-generation community college students by type of high school attended.

The type of high school, traditional or alternative, was used as the independent variable in a Mann-Whitney test for independent samples. The independent variable in this analysis was the number of completed credit hours. Table 28 presents the results of these analyses.

Table 28

Mann-Whitney U Test for Independent Samples
Completed Credit Hours by Type of High School

Type of High School	Number	Mean	SD	Mean Rank	Z Value
First Generation					
Traditional	364	17.52	11.33	218.99	-.92
GED/Alternative	68	16.76	12.65	203.67	
Non-first Generation					
Traditional	132	17.84	12.77	78.85	-1.30
GED/Alternative	21	13.86	13.09	65.38	

The results of the Mann-Whitney test for independent samples provided no evidence of statistically significant differences between type of high school, traditional or GED/alternative. This finding was consistent for both the first generation and non-first generation students. Based on these results, the null hypothesis of no difference is retained.

> *Null Hypothesis VIII* - There is no significant difference in the first year college success patterns among first-generation and non first-generation community college students by selected demographic variables: type of high school, gender, ethnicity, age, family income, and parent's highest level of education.
>
> *Alternative Hypothesis VIII* - There is a significant difference in the first year college success patterns among first-generation and non first-generation community college students by selected demographic variables:

type of high school, gender, ethnicity, age, family income, and parent's highest level of education.

Two stepwise multiple linear regression analyses were used to determine if selected demographic variables could predict college success patterns as measured by the number of completed credit hours and whether their predictive power varied for first-generation and non first-generation students. The independent variables in this analysis included: generation status, type of high school (traditional or GED/alternative), ethnicity, age, income, fathers' education, and mother's education. The nominal variables, generation status, type of high school and ethnicity were recoded using dummy coding to allow their use in a stepwise multiple linear regression analysis.

None of the independent variables entered the stepwise multiple linear regression analysis, indicating they were not statistically significant predictors of completed credit hours for either group. The correlations between the number of completed credit hours and the demographic variables were not sufficient to support the existence of predictive relationships. Based on this finding, the null hypothesis is retained.

Null Hypothesis IX - There is no significant difference the first year college success patterns among first-generation and non first-generation students by selected school-related variables: GPA, enrolled in remediation course(s) academic aspirations (program of intent), preferred campus of attendance, receipt of financial aid, and number of semesters enrolled.

Alternative Hypothesis IX - There is a significant difference between the first year college success patterns among first-generation and non first-generation students by selected school-related variables: GPA, enrolled in remediation course(s) academic aspirations (program of intent), preferred campus of attendance, receipt of financial aid, and number of semesters enrolled.

The completed credit hours were used as the dependent variable in a stepwise multiple linear regression analysis, with selected school-related variables used as the

independent variables. Separate regression analyses were completed for first-generation and non first-generation students. The school related variables included type of program in which the student was enrolled, campus of enrollment, receipt of financial aid, number of remedial credit hours, and GPA. The nominal variables, program, campus of enrollment, and receipt of financial aid were dummy coded to allow for use in the stepwise multiple linear regression analysis. The results of the analyses for first generation and non first-generation students are presented in Table 29.

Table 29

Stepwise Multiple Linear Regression Analysis
Completed Credit Hours by School-Related Variables

School-related Variables	Constant	b Weight	B weight	r^2	t-Value	Prob of t
First-Generation Students						
GPA	9.27	5.02	.41	.18	10.18	<.001
Receipt of financial aid		-3.85	-.12	.02	-2.98	.003
Transfer/Traditional Programs		2.31	.09	.01	2.28	.023
Number of Remedial Credit Hours		.17	.09	.01	2.08	.038
Enrollment - Eastern Campus		-3.25	-.12	.01	-2.78	.006
Enrollment - Downtown Campus		-2.67	-.10	.01	-2.39	.017
Multiple R						..48
R^2						..23
F ratio						24.51**
DF						6/494
Prob of F						<.001
Non First-Generation Students						
GPA	2.86	7.46	.68	.46	13.10	<.001
Multiple R						.68
R^2						.46
F ratio						171.72**
DF						1/205
Prob of F						<.001

**p≤.05

First-generation students. Six of the independent variables entered the stepwise multiple linear regression analysis, explaining 23% of the variance in number of completed

credit hours. The associated F ratio of 24.51 was statistically significant at an alpha level of .001 with 6 and 494 degrees of freedom. This result indicated that the six school-related variables; GPA, receipt of financial aid, enrollment in a transfer/tradiitonal program, number of completed remedial credit hours, enrollment at the Eastern and Downtown Campuses were significant predictors of completed credit hours. The relationship between receipt of financial aid, enrollment at the Eastern and Downtown campuses and completed credit hours were negative indicating that students who did not receive financial aid, and were enrolled at campuses other than the Eastern and Dovmtown campuses completed more credit hours.

A comparison of the beta weights indicated that GPA, which explained 18% of the variance, was the strongest predictor of completed credit hours. The positive relationship between these two variables indicated that students with higher grade point averages tended to have completed a greater number of credit hours. Receipt of financial aid explained 2% of the variance in completed credit hours. Each of the other variables that entered the equation explained an additional 1%.

The remaining independent variables; enrollment in career/technical programs, enrollment in allied health programs, and enrollment at the Downriver campus did not enter the regression equation indicating they were not significant predictors of number of completed credit hours. The correlations between these independent variables and the dependent variable were not sufficient to indicate the existence of predictive relationships.

Non first-generation students. The same school-related variables were used as predictors of completed credit hours in a stepwise multiple linear regression analysis. GPA entered the regression equation as the only statistically significant predictor of the

dependent variable. GPA explained 46% of the variance in the number of completed credit hours. The associated F ratio of 171.72 was statistically significant at an alpha level of .05 with 1 and 205 degrees of freedom. Students who had higher GPAs were more likely to complete more credit hours. The remaining variables did not enter the regression equation for non first-generation students indicating the correlations between these variables were not sufficient to be considered predictors of completed credit hours. (Appendix A presents the correlation matrix for these variables.)

A comparison of the findings between the two groups indicated that GPA was the strongest predictor of completed credit hours. Students who had higher grade point averages were more likely to complete their classes and accumulate credit hours toward either transfer or degree completion. The number of credit hours that were completed by first-generation students could also be predicted by additional independent variables (e.g., financial aid (-), enrollment in a transfer/traditional program (+), number of completed remedial courses (+), enrollment at Eastern campus (-), and enrollment at Downtown campus (-). These differences could be attributed to the differences in sample sizes (e.g., first-generation students (n=397), non first-generation students (n=285) which allowed variables with smaller, though significant, correlations to enter the stepwise multiple linear regression equation as significant predictors.

Based on these findings, the null hypothesis of no relationship between completed credit hours as a measure of college success and school-related variables is rejected.

Summary

The results of the data analysis have been presented in this chapter. The results

included the personal and school-related variables of the students that could be obtained from their school records. The results of the hypotheses testing for each of the nine hypotheses has also been provided in this chapter, with a decision regarding retention or rejection of each of the hypotheses. The conclusions and recommendations that were developed from the findings and related review of literature can be found in Chapter V.

Chapter V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The purpose of this study was to detect the effects of remediation, family income, and the influence of a parent's level of education upon college success patterns (retention) of first generation students attending an urban multi-campus community college. This research investigated the experience of the first-generation community college student compared with that of the non first-generation student by using a retrospective, non experimental, descriptive research design. This approach enabled the researcher to look at the same student at four different periods within an academic year: (1) as an entering student during the Fall 1994 semester; (2) as a continuing student during the Spring 1995 semester; (3) as a student attending the optional semester of Summer 1995; (4) and as a returning student attending the Fall 1995 semester (presumably as a sophomore--if they persisted).

This chapter includes a detailed discussion of the results of the statistical analyses presented in Chapter IV. Implications of the research findings are addressed in relation to first-generation students attending a multi-campus community college. Recommendations for future study are also presented.

The following research questions were investigated in the study:

- Is there a difference in first year college success patterns between first-generation and non first-generation students attending an urban multi-campus community college?
- What is the effect of remediation on first year college success relative to students being first-generation or non first-generation?
- What is the effect of fathers' and mothers' highest level of education on first

year college success between first-generation and non first-generation students?

- What is the effect of family income on first year college success between first-generation and non first-generation students?
- What are the effects of selected demographic variables on first year college success between first-generation and non first-generation students?
- Can college success be predicted by remediation, academic aspirations, preferred campus of attendance, receipt of financial aid and number of semesters enrolled at an urban multi-campus community college?

One major question addressed in this study was whether there are differences between first generation and non first-generation college students in first-year college success (retention). First generation status is based on the education level on the parent. Studies reporting on first-generation students reflect the parental level of education as one of the independent variables that make up a composite definition of socioeconomic status (SES). Usually, parents' occupation and income have been included with parents' education variables used to define SES. This study separately identifies parents' education by father and mother by three levels: (1) completion of elementary school--kindergarten through eighth grade; (2) completion of high school--ninth grade through the twelfth grade or an earned diploma through the General Education Development (GED) testing programs; and (3) completion of college--the completion of an associate, baccalaureate, or graduate degree.

Because of the difficulty experienced in trying to find research specifically about first-generation students in general as well as those attending the community college, the literature search reported in Chapter II consisted of articles that focused on first-generation students in higher education, family background characteristics, college choice and persistence, parental support and college persistence, peer support and college

persistence, goal setting, college attrition, remediation support services, and the influence of financial aid on retention. Special attention was given to articles that examined parents' educational level and similar background variables as independent variables. This approach identified articles that primarily used the parental education variable as part of a composite of SES measure, rather than a separate independent variable. Nevertheless, the literature review presented considerable evidence that parental education (or SES) affects students' educational development.

Another central question investigated by this study is whether the fact of a student's parent having attended college carries certain critical consequences for that student in terms of college success; is it correct to assume that a student's first-year community college experience with credit hours completed is directly affected by whether their parents attended college? The federal and state governments have developed several educational programs to serve the first-generation college student population, including Talent Search and Upward Bound at the federal level and Displaced Homemakers' scholarships at the state level. The basic concept of federal and state government programs has been to provide special assistance that would help first-generation students have an equal opportunity in higher education. Additionally, these programs are designed with the immediate purpose of increasing the percentages of first-generation students who attend postsecondary institutions. For purposes of such support programs, first-generation college students have been grouped with other student groups such as students from low-income families, and under represented ethnic groups, all of whom are presumed to need extraordinary educational support.

Discussion of Research Findings

The participants under investigation included 713 cases taken from a random sample cohort of all students who enrolled and applied for financial aid during the fall 1994 semester at Wayne County Community College District. Approximately 80% of the total enrolled student population applies for financial aid. The sample incorporated 397 first-generation and 285 non first-generation college students.

Support for *Null Hypothesis I* was unexpected. Results of this test did not indicate differences in first year college success patterns between first-generation and non first-generation community college students attending a multi-campus community college (t=-.23, p=.05). While contrary to this researcher's expectations, some related research is consistent with this finding. The study conducted by Billson and Terry (1982) considered students' first-generation even if a sibling attended college. The research design also allowed for the testing of one parent completing a college degree. Thus, they studied the influence of a student's family background inclusive of parents' educational level on college student attrition and retention with first-generation and second-generation students. The results of their study showed no significant difference between first-generation college students and second-generation college students with regard to *expectations* of a college degree attainment although first-generation students were found to: a) work more hours; b) receive less support from their parents in all aspects of collegiate life; c) be less likely to live on campus, be involved in campus organizations, meet friends on campus and work on campus than their non first-generation counterparts.

Support for *Null Hypothesis II* was unanticipated. The researcher believed that first-generation students would be enrolled for more credit hours of remediation than non

first-generation students. This belief was fostered by the criteria used for selection of students to participate in federal programs like Talent Search and Upward Bound, which targeted first-generation students. This research did not find differences in the enrollment in remediation course work between first-generation and non first-generation students. To the contrary, the finding showed no significant difference ($t=1.06$, $p=.05$) for community college students. First-generation students enrolled in a mean of 6.64 credit hours of remediation course work while non first-generation students enrolled with a mean of 6.19 credit hours of remediation course work. This finding could be attributed to the entering age of the average community college student despite college generational status. Community college students are usually older and financially independent of parents, and return to school after an extended period of completing high school, thus requiring substantial remediation whether first generation or not.

Haeuser (1993) compared remedial students with the general student population. The study revealed that minority students, students with an intent to transfer to a four-year college or university, and full-timers were all over-represented among remedial students. Outcome measures showed that: (a) more than 50% of the students taking remedial course work successfully completed the courses; (b) first-time students taking remedial course work showed higher fall-to-spring retention rates than first-time students as a whole; and most remedial English students successfully complete subsequent college-level courses. Additionally, Manning (1991) reported on a retention program designed and carried out by staff of Suffolk Community College Eastern Campus (SCCEC) located in Riverhead, New York. The program was built on the belief that access to higher education does not necessarily lead to college success. Thus, a study was carried out to test

outcomes of the retention program. Analyses of the initial enrollment survey revealed that:

- 40 % of the student body was less than 20 years of age;
- 47% were enrolled on a full-time basis of 12 credits or more;
- 45% were attending college for job preparation,
- 55 % entered with the objective of receiving a certificate or degree; and
- 43 % worked between 21 and 40 hours per week.

The second goal of the research was to assess the retention program offered by SCCEC. The goal of the retention program was to increase retention of students by providing skill building activities and academic support necessary for college success. The activities and support services consisted of developmental course work, faculty mentors, skill building workshops, and other activities of this nature. The results of the study showed that the retention rate for entering students after one semester increased after the program was implemented. Specifically, retention increased from 73.3% in September 1986, to 78.8 % in February 1987, then to 88.9 % in September 1988. This is evidence that remediation is equally effective for many community college students, regardless of generational status.

Support for *Null Hypothesis III* was unexpected. No statistically significant differences were found between first-generation and non first-generation students in the effects of generational status, fathers' educational level, or mothers' educational level on first year academic success. The researcher believed that the offsprings of a college graduate would be as successful as the parents, as pointed out in most of the articles reviewed. However, some evidence in the literature points to the contrary. Barahona (1990) conducted a study to determine the effects of first-generation status upon high school sophomores and seniors regarding college aspirations, college attendance, and

college retention. The researcher established through a pilot study that a first-generation effect could not be explained entirely with reference to parental level of education, family income, race or ability. Additionally, Hudson (1991) studied the effects of parental educational level on first year college achievement. The results of the study showed that first year achievement was significantly related to scholastic preparation, whereas retention through graduation was more related to the influence of family and friends.

Support for *Null Hypothesis IV* was expected. There is a significant difference in the first year college success patterns between first-generation and non first-generation community college students by family income. The results of the factorial analysis of variance produced no statistically significant results for either main effect, generational status or income. The interaction between generational status and income on completed credit hours also was not statistically significant. Although there is a difference between family income levels of first-generation and non first-generation community college students, the difference does not interact in such a manner as to influence first-year college success as measured by completed credit hours. These findings showed that completed credit hours did not differ compared with either the generational status or the family income levels. Thus, family income is equally important to first-year college success for first-generation and non first-generation students as measured by credit hours completed during the first year of study. Based on these results, the null hypothesis of no difference is retained.

Material presented in Chapter II supported the results. Barahona (1990) conducted a study to determine effects of family income of first-generation high school sophomores and seniors regarding college aspirations, college attendance, and college retention. Again,

through a pilot study, Barahona (1990) established that a first generation effect could not be explained entirely concerning family income, race, or ability. Specifically, she found that family income had a significant positive Beta for predicting first-generation students' tenth-grade aspirations, but not for students of college graduates--thus, the negative effect of a lower family income occurs among tenth-grade first-generation students. The study also showed that there was no evidence suggesting the presence of an interaction effect between family income and being a first-generation student. Therefore, Barahona concluded that there is a significant difference between first-generation students and children of college graduates based on income, however this difference does not interact in a way that affected educational aspirations, attendance or retention of these students.

Stage and Hossler (1989) studied the relationship between the socioeconomic status of a family (parents' income, marital status, level of education, and number of children enrolled in college) and the parent's expectations for the children to complete college as measured by parents' savings for college expense. The results of their study showed that a parent's educational level affected the parents' expectations of a child to attend college. However, it did not influence the retention of rates of the student.

Null Hypothesis V was rejected. The results of the statistical analysis showed that there was a statistically significant difference among the number of semesters enrolled and first year college success patterns. The number of completed credit hours differed by the number of enrolled semesters, with students who had enrolled for fewer semesters having completed fewer credit hours. No significant differences were found for generational status or for the interaction between generational status and the number of semesters enrolled.

Evidence to support this finding is reported by the National Center for Education Statistics (NCES): Profile of Older Undergraduates-1989-90 as referenced in Chapter II. The persistence pattern of students with certificates and associate degrees was different for the older and younger first-time student, according to the report by NCES. Older students have a higher rate of completing a certificate within nine months when compared with younger students. Of the older students seeking a certificate in 1989-90, 36% completed the program within the nine-month period, compared with 25% of the students from the younger group. However, the report noted that the older students were less likely to complete their certificate or degree objective once the nine-month period passed. Specifically, a 19% completion rate was recorded for the older student compared with a 22% completion rate for the younger student.

On the issue of the associate's degree, the younger student was more likely to complete the degree than the older student. The report notes that this occurrence is expected because the older student tends to enroll on a part-time basis and therefore takes longer to complete the degree of intent. However, older students were also much more likely to withdraw without returning within this two-year period. The withdrawal rate of older students was 66% compared with 40% among younger students (NCES, 1991).

On the other hand, Barahona (1990) found that first-generation college students were less likely than non first-generation college students to complete a degree in part because they attended public, nonselective, two-year institutions and were more likely to be commuter students. The study also found that first-generation college students appeared to experience a negative accumulation of factors including lack of support from significant others, lower parental income, lack of siblings attending college, lower high

school grades and test scores, and limited enrollment in college preparatory programs during the high school years. The study also established that the negative effects that beset a first-generation college student were well established by the sophomore year of high school. Other studies have focused on the relationship between student persistence (Hudson, 1991; Pantages & Creedon, 1978; Staats, 1991) and highest educational attainment level of parents (Gruca, 1989; Rockwell, 1972). The results of these investigations varied, with some researchers reporting a strong relationship between a student remaining in college and the highest educational level of parents (Rockwell, 1972), and others indicating the existence of a weak relationship between the two variables compared with retention (Hudson, 1991; Webb, 1973).

Based on the findings, *Null Hypothesis VI* was rejected. There is a significant difference between cumulative grade point average of first-generation and non first-generation community college students. Thus, while this finding of a significant difference between the two populations in GPA is consistent with past research findings, the reasons for the differences are not yet well understood. First-generation students' cumulative grade point averages were higher than non first-generation students. This finding was interesting and surprising for this researcher. Perhaps the results suggest that the parent's lack of a college degree may have motivated the first-generation student to succeed beyond that of his parents.

The support of this hypothesis was consistent with studies conducted by Hudson (1991) and contradicts Riehl (1994). Hudson (1991), found that first year achievement was significantly related to scholastic preparation. Accordingly, Riehl (1994) compared the academic preparations, aspirations and first-year achievement of first-generation and

non first-generation students. The study showed that first-generation students had lower SAT scores and higher high school grade point averages, but no difference was found in high school class rank. The study also showed that first-generation students were more disposed to withdrawal during the first-semester, had lower first-semester grades, and were less likely to return for the second year.

Support for *Null Hypothesis VII* was not expected. The statistical test found no evidence of differences in the relationship between type of high school, traditional or GED/alternative and first-year college success. Based on the research by Hudson (1991) noted above and Stage and Hossler (1989) noted below, the expectation was that students in traditional high school programs would perform better in college than students who had completed GED or alternative programs. Stage and Hossler (1989) found that academic preparation and degree aspirations of a first-year student were more influential on retention during the first year of college than subsequent college years. The preparation for a GED can be completed in approximately three to four months, with intensive study, while students who completed programs in a traditional high school have four years to develop appropriate study habits. Although this researcher conducted an exhaustive review of literature, articles on differences in community college grade point average between students who attended a traditional high schools and those who had completed a GED were not to be found

Support for *Null Hypothesis VIII* was not as expected. A stepwise multiple linear regression analyses was used to determine if selected demographic variables could predict college success patterns as measured by the number of completed credit hours and whether their predictive power varied for first-generation and non first-generation students. The personal demographic characteristics of the students; the effects of

generational status, type of high school, ethnicity, age, income, fathers' education, and mothers' education; were not predictive of their success in college as measured by credit hour completion. The average age of students attending the community college is over 25 years of age and has continued to increase over the last 20 years. The researcher expected that age would be a predictor of college success as those who are older and have more life experiences may value a college education more than a student directly out of high school. By working in entry-level jobs at a minimum wage, the older students may realize the need for an education to develop skills valued in the workplace and recognize that a good grade point average is essential for their college success.

According to a report issued by the National Center for Education Statistics (NCES) entitled Profile of Older Undergraduates: 1989-90, students 25 or older made up approximately 56.2% of the enrolled population in two-year public institutions. When comparing the age groups of students attending community colleges to traditional younger students, older students (25 years and older) show different demographic trends and socioeconomic characteristics while attending college. According to the NCES report, older students are predominately White and female. Generally, older students tend to have different family situations and responsibilities when compared with younger students. Older students may be single with dependent children. The parents of older students usually have lower educational levels than their younger counterparts. Although comparing the total financial situation of students is difficult, it is assumed that younger students have access to parental resources, while the older student is usually financially independent, falling into the low- to-moderate family income category.

Null Hypothesis IX was rejected as was no significant relationships in the first year college success patterns among first-generation and non first-generation students enrolled

in remediation course (s) by selected school-related variables: academic aspirations (program of intent) preferred campus of attendance, receipt of financial aid and number of semesters enrolled.

A stepwise multiple linear regression analyses was used to determine if selected school-related variables could predict college success patterns as measured by the number of completed credit hours and whether their predictive power varied for first-generation and non first-generation students. This researcher found the explanatory variables that entered the equation interesting. One variable that entered the equation as a positive predictor of college success for both non first-generation and first-generation students was cumulative grade point average. For first-generation students, receipt of financial aid, an enrolled program (transfer/traditional), enrollments in courses classified as below college level (remediation), attendance at the Downriver and Northwest campus not attending the Eastern or the Downtown campus were also significant predictors of college success as measured by completed credit hours but not for non first-generation students.

Not surprisingly, the variable in this study found to have the greatest effect on college success was college cumulative grade point average. Students who had higher grade point averages completed more credit hours, and were more likely to persist to completion. This finding was consistent with studies conducted by Hudson (1991), Staats (1991), and Stage and Hossler (1989). Both researchers pointed to academic preparation and degree aspirations of a first year student as more influential on retention during the first year of enrollment. Hudson (1991) showed that first year achievement was significantly related to scholastic preparation whereas retention through graduation was more related to the influence of family and friends. These findings were consistent with other research conducted on the subject of expectations by Carpenter and Fleishman

(1987), Conklin and Dailey (1981), Murphy (1981).

The nonreceipt of financial aid could also predict first-generation college success, but not so for non first-generation students. The relationship between receipt of financial aid and completed credit hours were negative, showing that students who did not receive financial aid completed more credit hours. This finding contradicts past research. Although, the differences could be attributed to differences in sample size (e.g., first-generation students (n=397), non first-generation students (n=285) which allowed variables with smaller, though significant, correlations to enter the stepwise multiple linear regression equation as significant predictors. Thus, this research finding of a significant, negative relationship between the receipt of financial aid and the number of credit hours completed (college success) by first-generation students is inconsistent with past research findings and the reasons for the result are not yet well understood. Financial aid is not being restricted to those students who have a reasonable expectation of success in college and students who do not do well on their ASSET tests are not as likely to receive financial aid as those who perform well on these tests. Students are also aware that they are responsible for paying back their student loan obligations once they have completed their education. Because of this obligation, they are more likely to persist and must exhibit academic success (i.e., GPA of 2.00 or higher). Financial aid is also available for a limited time period, which may influence students to complete their education within an appropriate time frame.

Carroll (1987), Spencer (1993), and Terkla (1985) reported on financial aid recipients and persistence. Terkla reported that students with financial aid were more likely to complete their courses than those not receiving this type of assistance. The research also showed that there were only two other variables with a stronger effect on

persistence than the financial aid variable and they were: high school grade point average and degree of intent. These findings are similar to the findings in this study in that college cumulative GPA and academic aspirations (program of intent) were the two other variables with a stronger effect on college success.

Additional support was found in Carroll's (1987) research. He found that students without financial aid awarded in grants discontinued college at higher rates than students who were awarded large grants of financial aid. Additionally, it was reported that students attending public institutions with some form of grant assistance showed higher completion rates than students with no financial aid assistance in grants. Additional support for this finding was reported in a study that examined the financial aid population of the Wayne County Community College District during the early 1990s. Spencer (1993) found that financial aid students persisted to degree completion at a higher rate than nonfinancial aid students. Additionally, the study showed that students with a combination of financial aid award types persisted longer than students with Pell Grant aid only.

The students' program entered the equation indicating that students who were planning to transfer or were in a traditional program (liberal arts and science) were more likely to have completed more credit hours than students who were in other types of programs (vocational technical and allied health). Students who planned to continue their educations generally have educational and career goals established and are more motivated to succeed. The students in the present study may have understood the value of completing a baccalaureate degree and wanted to graduate with traditional liberal arts degrees that would allow them to transfer to another college to attain their educational goals.

The fourth variable to enter the regression equation for first-generation students

was course work below college level (remediation). While participation in remedial course work did not enter the regression equation for non first-generation students in the present study, it appeared to be important in predicting retention of first-generation students beyond the first semester. Support for this finding was presented in previous research (Haeuser, 1993; Hester, 1992; Manning, 1991; Slark, 1989). Haeuser (1993) conducted a study on the comparison of remedial students with the general student population. The study revealed that: a) more than 50% of the students taking remedial course work successfully complete the courses; b) first-time students taking remedial course work showed higher fall-to-spring retention rates than first-time students as a whole, and c) most remedial English students successfully complete subsequent college-level courses. Hester's (1992) study supported this finding. Hester found that students receiving developmental course work persisted longer than those identified though ASSET testing as needing remediation, but chose college level course work. Hester's study consisted of students attending the Wayne County Community College District. Manning (1991) reported on the retention of students exposed to programs that provided skill building activities and academic support necessary for college success. Activities and support services in these programs consisted of developmental course work, faculty mentors, skill building workshops, and other activities focused on improving student retention. The results of the study showed that the retention rate for entering students after one semester increased after the program was implemented. Additionally, Slark (1989) found that 85% of students completing developmental course work in writing and 82% of students receiving developmental course work in reading persisted longer in community colleges than those who were identified as needing remediation, but chose to take more advanced courses. These findings underscore the importance of remediation for first-generation

student success in the urban community college.

The final variables to enter the equation for first generation students were enrollment at the Eastern and Downtown campuses. As the relationship between enrollment at these campuses and number of completed credit hours was negative, it appears that first-generation students who are more likely to persist are attending the other campuses. As previously noted, these other campuses are located in geographic areas where the Michigan Metropolitan Information Center of Wayne State University (1996) reports a higher percentage of high school graduates. The implications of this finding are not yet well understood. However, it is well documented in the community college literature that students attend campuses closest to their homes. Additional study is needed to address the issues raised by these results.

Discussion

As the pool of available students continue to shrink, community colleges have a special interest in identifying factors associated with retention and graduation. Additionally, in view of the importance of skills and knowledge for success in today's skill intensive labor market, community college administrators are interested in identifying retention factors and structuring administrative policies and procedures to address college success patterns of all students. For an urban community college located in southeastern Michigan, learning more about first-generation students, who comprised a significant portion of the student body, can help develop these policies and procedures.

This study examined differences in first year college success patterns (retention) between first-generation students and non first-generation students attending a multi-campus community college. First-generation students are defined as the first students in

their respective families to attend a post-secondary institution.

As community colleges have an open-door policy, many students, including both first-generation and non first-generation students, need help in upgrading their academic skills to perform successfully at the college level. Remediation has been shown both in the literature and from the results of the present study to have a positive effect on student persistence and outcomes. The finding of this research appears to suggest that the entering community college student requires remediation upon entry despite having completed high school. This research suggests that proactive measures by the community college district are needed. For example, feed back to the local high school on the academic performance of their high school graduate would be helpful. This feedback may take the form of a report on the performance of their students from entry to exit. That is, results of entry examinations, yearly grade point averages, and sharing with high school department heads the curriculum associated with various degrees may assist the high school in preparing their students for postsecondary study.

Socioeconomic factors, such as family income and parents' highest level of education, can also influence college success patterns (retention) of first-generation students, although these variables were not significant predictors of student success as measured by the number of completed credit hours.

Results of data analyses showed significant differences between first-generation and non first-generation community college students relative to the number of semesters attended and cumulative grade point average. First-generation students seemed more-goal oriented than non first-generation students. The first-generation student that was planning to transfer to a university for additional education was also the student who was more likely to persist during the first year. The success of first-generation and non first-

generation students in an urban setting varied based on individual circumstances. As this study used closed records of the students, it was not possible to determine if there were other variables that could be influencing their persistence beyond the ones included in this study.

Implications for Practice

In the area of policy, the results of this research suggest that policy makers of the community college should take into consideration the finding that non first-generation students are not achieving and persisting at the same rate as the first-generation student during the first year of college as measured by completed credit hours. The results of this study show that first-generation students are receiving a higher GPA and remain in college longer than non first-generation students. This finding is support for the existence of support programing at the community college level. First-generation students are given priority in programing that serves a population referred to as "At Risk." However, the results of this research suggest that the non first-generation student is at a higher risk of receiving grades below a letter grade of 'C'and having a higher rate of attrition when compared to first-generation students. This researcher suggests that community college support programs should be inclusive of all students despite generational status. This finding has implications for federal, state, and matching college program funding allocations.

In the area of procedure, the results of this research suggest that administrators would be wise to consider switching position roles within their financial aid office operations. This research suggests that students be given maximum exposure to financial aid professionals at the point of document intake within the financial aid office. Traditionally, financial aid offices are staffed with paraprofessionals at the service counter

and the professional evaluator performs the review of financial aid applications for award purposes. This practice renders professional expertise relatively inaccessible to the student. This researcher is suggesting, though more costly in the short term, that the professional with vast financial aid knowledge be accessible upon intake and using the para professional to primarily review and make financial aid award offers. This role reversal would assure that the community college students are interacting with the financial aid representative, receiving complete and the most informed information source which in turn translate to college success as measured by credit hours completed.

Improvement in the number of articulation agreements is needed between high schools and the community college to help ease the transition between the two educational levels. By having faculty and administrators at both the high school and community college work together to plan curriculums to ensure that students have completed the prerequisites for success in college, students can be prepared for the course work necessary in their selected program. Articulation agreement between the community college and high school should be encouraged. For example, if students are interested in engineering, they may want to take drafting classes in high school but have that credit transferred to the community college upon graduation as college credit. Such agreements foster opportunities for the student to participate in the advantages of advanced placement.

Community colleges need to be aware of first-generation and non first-generation students to help their transition into college life. Many students are not aware that college life includes more than academics. Social activities are often ignored because of time constraints placed on students. Orientations should include time for becoming acquainted with other students in their programs. Faculty members should establish learning teams to

help students become comfortable with working with other students. Other types of activities should be planned to help students both academically and socially.

Community college faculty and staff would be wise to consider the course work offered in high schools. Community colleges could profit by providing mentoring outside of class, suggesting completion of remedial work in deficit areas, and providing encouragement to students.

Community College administrators would also be wise to begin planning to meet the needs of the influx of students expected in the next century. The metropolitan area serviced by WCCCD is becoming more diversified in terms of race/ethnicity, gender, and socioeconomic status. The community college is located in the only county in the State of Michigan where there are three separate community colleges all vying for a shrinking pool of students. In addition, there are several four-year colleges and universities located in this county that are also competing for these students.

The students attending college also represent an increasingly multi cultural population, with many students being either immigrants or first-generation children of immigrants. These students may be more motivated as their parents may have stressed the importance of doing well in school because of the denial of an education in their native country. Trying to learn the language, adjust to the college environment, and assimilate to the majority culture while maintaining their native culture all place barriers to their persistence. As this segment of the college population continues to increase, the community college administrators need to be sensitive to their needs and plan programs to help them with their adjustment. By beginning to planning now, administrators can help ensure success for students who are serious and committed to completing their education and attaining success in their adult lives.

Recommendations

Based on the findings and conclusions of this study, the following recommendations for future research are made:

1. Conduct a similar study to investigate the effects of an account receivable balance on first-year college retention.

2. Investigate the effects of the number of credit hours in remediation on two-year program completion for community college students. Future research should also consider repeated remediation courses.

3. Examine the effects of parents' highest level of education on the cumulative college grade point average for first-generation and non first-generation students.

4. Use a longitudinal study to determine the academic outcomes of first generation students beyond first year to determine if they are meeting their educational objectives in completing their highest anticipated degrees.

Appendix A

Correspondence

Office of Admissions

Central Administration
801 W. Fort
Detroit, MI 48226
313-496-2539
Fax: 313-961-2791

Wayne County Community College

MEMO

RECEIVED
FEB 19 1996
OFFICE OF THE PRESIDENT

To: Dr. Curtis Ivery, President

From: Jacqueline Hodges, Admissions Administrator

Subject: Permission to use Student Data and College Identity for Research

Date: February 19, 1996

Permission is being sought to use student admission, records, and financial aid data, and use of the college's identity as part of study to complete my doctoral dissertation. The purpose of the study is to determine differences between first-generation and non first-generation students attending an urban multi-campus community college. The design of this study is non experimental. Thus, this researcher will use no experimental or control group. However, techniques associated with descriptive research using descriptive and inferential statistical methods will be employed to describe and investigate the extent to which variation occurs between first-generation and non first-generation students concerning academic aspirations and the college success patterns during the first year of attendance.

Institutional student data needed for the study include: birth date, campus of intent to pursue study, ethnicity, financial aid applicant data, gender, GPA, program of intent, parents highest level of education completed, registration history, and type of high school attended. These data will be compiled and used in the aggregate. Individual students will not be identified--student record information will be recorded by this researcher so that individuals cannot be identified, directly or through identifiers linked to the student. All individual student information obtained will be kept confidential in accordance with the Family Educational Rights and Privacy Act of 1974 as amended.

A limited amount of research has been conducted on the determination of characteristics (academic and demographic) associated with first-generation students attending an urban community college. The information that is available is derived from studies on students attending the university. This study of academic behavior and selective demographic variables about first-generation students is important in identifying factors that can be addressed through the development and implementation of administrative policies and practice of an urban multi-campus community college. Thus, college administrators may find the study useful in identifying academic behavior that may be addressed through policy and practice at Wayne County Community College.

Your consideration in granting this permission will be greatly appreciated.

Concurrence: _____
Dr. Curtis Ivery, President

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Wayne State University
Human Investigation Committee

Behavioral Institutional Review Board
University Health Center, 8C
4201 St. Antoine Blvd.
Detroit, MI 48201
(313) 577-1628 Office
(313) 993-7122 Fax

Notice of Protocol Exempt Approval

TO: Jacqueling Hodges, Education
(Administrative & Organizational Studies)
19456 Tracey
Detroit, MI 48235

FROM: Peter A. Lichtenberg, Ph.D. Peter A. Lichtenberg Ph.D
Chairman, Behavioral Institutional Review Board

SUBJECT: Exemption Status of Protocol # B 06-36-97(B03)-X; "The Effects of First Generation Status Upon First-Year College Success Patterns of Students Attending an Urban Multi-Campus Community College"

SOURCE OF FUNDING: No Funding Requested

DATE: July 2, 1997

==========

The research protocol named above has been reviewed and found to qualify for exemption according to paragraph #4 of the Rules and Regulations of the Department of Health and Human Services, CFR Part 46.101(b).

Since I have not evaluated this proposal for scientific merit except to weigh the risk to the human subjects in relation to potential benefits, this approval does not replace or serve in the place of any departmental or other approvals which may be required.

Cc: M. Addonizio, 377 Education

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Appendix B

Data Collection Tool

DATA COLLECTION FORM

Total Credit Hours:
Attempted: Fall 1994 Winter 1995 Summer 1995 Fall 1995
Completed: Fall 1994 Winter 1995 Summer 1995 Fall 1995
Total Credit Hours Remediation: _____
Program of Intent: Transfer Career Tech Health Voc. Tech. Self Unknown CS.CE
Cumulative GPA: _____
Type of High School Attended: Traditional GED/Alternative
Campus of Attendance: Downtown___ Downriver___ Eastern___ Northwest___
Financial Aid Recipient: Yes _____ No _____
Gender: Male _____ Female _____
Ethnicity: AA AI CA AP HISP AR OT NR
Highest Education of Father: K-8 9-12 College Unknown
Highest Education of Mother: K-8 9-12 College Unknown
Family Income: 5,000 & Under 5,001-15,000 15001-25,000 25,001 & Over Unknown
Date of Birth: MM___ DD___ YY___

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ABSTRACT

THE EFFECTS OF FIRST-GENERATION STATUS UPON THE FIRST YEAR COLLEGE SUCCESS PATTERNS OF STUDENTS ATTENDING AN URBAN MULTI-CAMPUS COMMUNITY COLLEGE

by

JACQUELINE LA-VON HODGES

May, 1999

Advisor: Dr. Michael Addonizio

Major: Higher Education

Degree: Doctor of Education

Community colleges have a special interest in identifying factors associated with retention and graduation. Additionally, community college administrators are interested in the identification of retention factors and how to structure administrative policy and procedure that address college success patterns of all students. The first generation student is of particular concern. The first step in developing student-centered policies and practices is to gain a clear understanding of demographic characteristics and first year academic behavior of the enrolled student. For an urban community college in southeastern Michigan this means learning more about first-generation students, who make up a significant portion of the student body.

The problem investigated in this study was to determine if there were differences in first-year college success patterns (retention) between first-generation students and non first-generation students attending a multi-campus community college. The purpose of the study was to determine the effects of remediation, family income, and the influence of a parent's highest level of education upon college success patterns (retention) of first-

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generation students. Information from 713 student cases was taken from the cohort of all students who enrolled and applied for financial aid during the fall 1994 semester. Approximately 80% of the student population applies for financial aid. The results of data analyses showed significant differences between first-generation and non first-generation community college students relative to the number of semesters attended and cumulative grade point average. A stepwise multiple regression analysis resulted in cumulative grade point average, financial aid recipient, enrolled in a transfer/traditional program, enrolled in courses classified as below college level (remediation), and attending campuses other than Eastern and Downtown as significant predictors of college success.. These variables combined explained 23% of the variance within first year college success of students attending a multi-campus community college. No significant differences were found between the two groups related to college success relative to the number of credit hours completed, number of courses classified as below college level (remediation), the highest level of education completed by father, highest level of education completed by mother, family income, types of high school attended, age, gender, and ethnicity.

Autobiographical Statement

Jacqueline La-Von Hodges

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